

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTAAJP1626

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

***** Welcome to STN International *****

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 JUL 12 BEILSTEIN enhanced with new display and select options,
resulting in a closer connection to BABS
NEWS 4 AUG 02 IFIPAT/IFIUDB/IFICDB reloaded with new search and display
fields
NEWS 5 AUG 02 CAPLUS and CA patent records enhanced with European and Japan
Patent Office Classifications
NEWS 6 AUG 02 The Analysis Edition of STN Express with Discover!
(Version 7.01 for Windows) now available
NEWS 7 AUG 27 BIOCOMMERCE: Changes and enhancements to content coverage
NEWS 8 AUG 27 BIOTECHABS/BIOTECHDS: Two new display fields added for legal
status data from INPADOC
NEWS 9 SEP 01 INPADOC: New family current-awareness alert (SDI) available
NEWS 10 SEP 01 New pricing for the Save Answers for SciFinder Wizard within
STN Express with Discover!
NEWS 11 SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX
NEWS 12 SEP 27 STANDARDS will no longer be available on STN
NEWS 13 SEP 27 SWETSCAN will no longer be available on STN
NEWS 14 OCT 28 KOREAPAT now available on STN
NEWS 15 NOV 18 Current-awareness alerts, saved answer sets, and current
search transcripts to be affected by CERAB, COMPUAB, ELCOM,
and SOLIDSTATE reloads

NEWS EXPRESS OCTOBER 29 CURRENT WINDOWS VERSION IS V7.01A, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

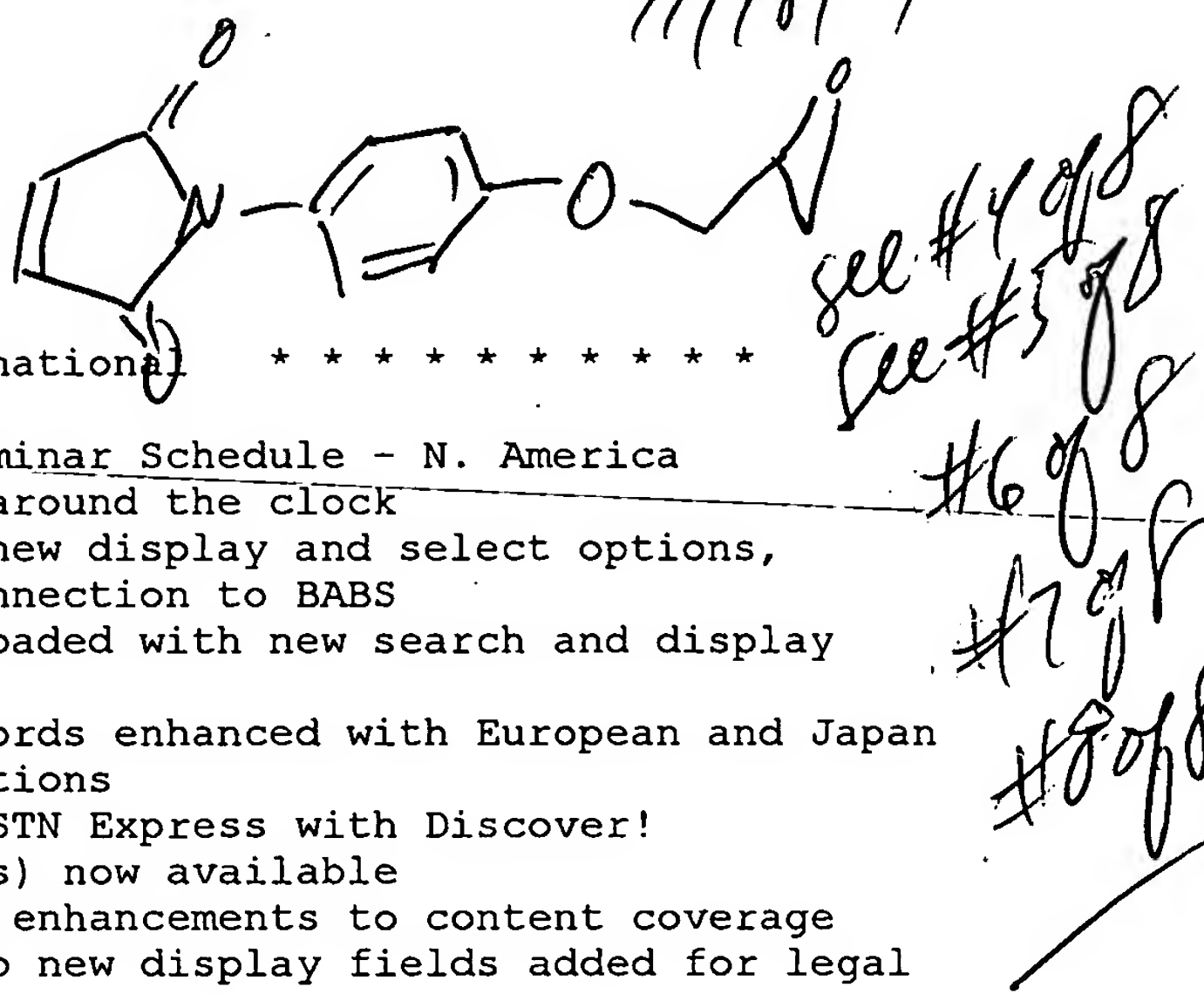
All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

***** STN Columbus *****

FILE 'HOME' ENTERED AT 17:24:21 ON 18 NOV 2004

=> fil reg

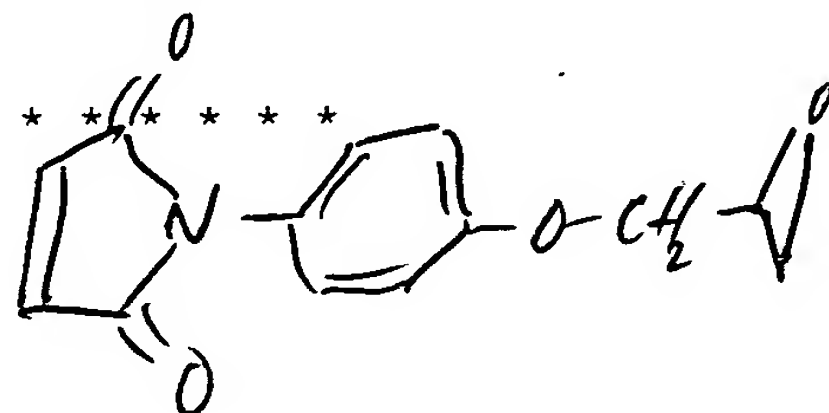
10/621,520
Structure Searcher
11/18/04



1-[4-(oxiranylmethoxy)phenyl]

1H-pyrrole-
2,5-dione

C₁₃H₁₁NO₄



COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 17:24:33 ON 18 NOV 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 17 NOV 2004 HIGHEST RN 783276-57-3

DICTIONARY FILE UPDATES: 17 NOV 2004 HIGHEST RN 783276-57-3

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

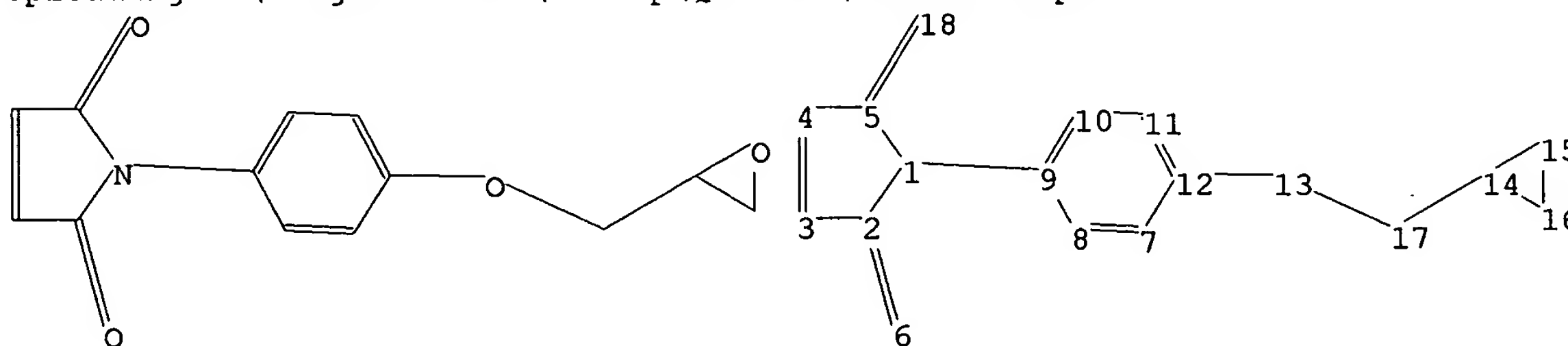
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\maleimideepoxide2.str



chain nodes :

6 13 17 18

ring nodes :

1 2 3 4 5 7 8 9 10 11 12 14 15 16

chain bonds :

1-9 2-6 5-18 12-13 13-17 14-17

ring bonds :

1-2 1-5 2-3 3-4 4-5 7-8 7-12 8-9 9-10 10-11 11-12 14-15 14-16 15-16

exact/norm bonds :

1-2 1-5 1-9 2-3 2-6 3-4 4-5 5-18 12-13 13-17 14-15 14-16 15-16

exact bonds :

14-17

normalized bonds :

7-8 7-12 8-9 9-10 10-11 11-12

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:CLASS 14:Atom 15:Atom 16:Atom 17:CLASS 18:CLASS

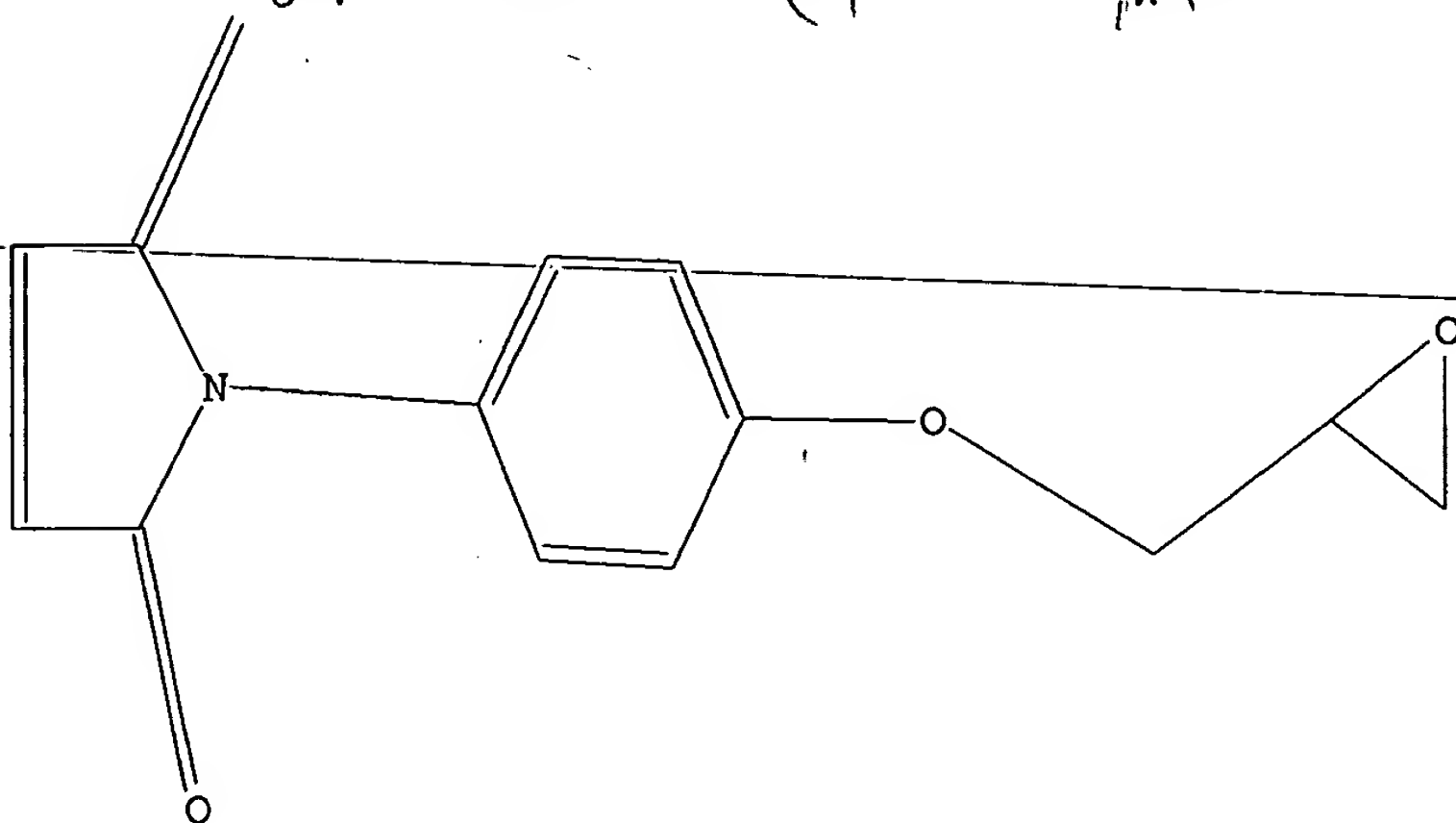
L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STR

*(this has oxygen here)
in the search*



Structure attributes must be viewed using STN Express query preparation.

=> s L1

SAMPLE SEARCH INITIATED 17:25:49 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 13 TO ITERATE

100.0% PROCESSED 13 ITERATIONS
SEARCH TIME: 00.00.01

1 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 44 TO 476
PROJECTED ANSWERS: 1 TO 80

L2 1 SEA SSS SAM L1

=> s L1 full

FULL SEARCH INITIATED 17:25:59 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 307 TO ITERATE

100.0% PROCESSED 307 ITERATIONS
SEARCH TIME: 00.00.01

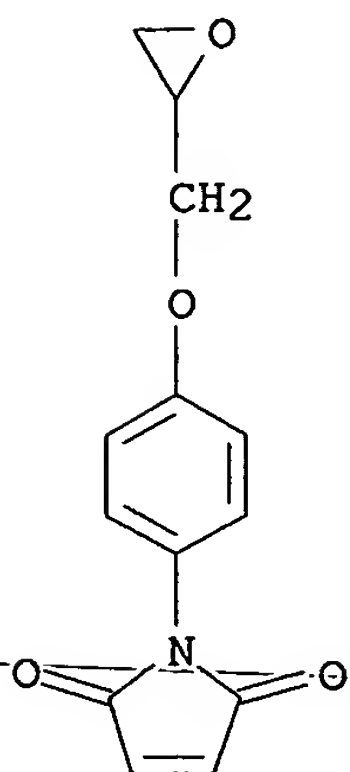
7 ANSWERS

L3 7 SEA SSS FUL L1

=> d scan

L3 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, homopolymer (9CI)
MF (C13 H11 N O4)x
CI PMS

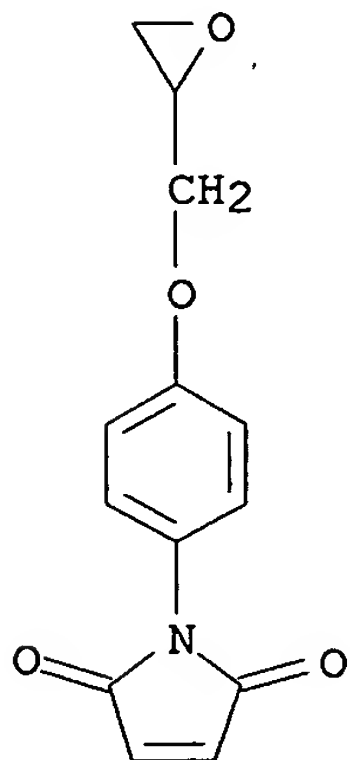
CM 1



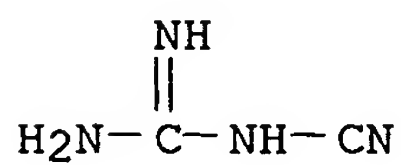
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):7

L3 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN Guanidine, cyano-, polymer with 1-[4-(oxiranylmethoxy)phenyl]-1H-pyrrole-
2,5-dione (9CI)
MF (C13 H11 N O4 . C2 H4 N4)x
CI PMS

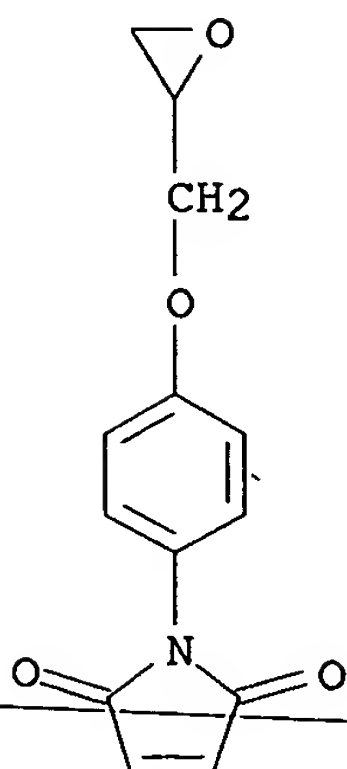
CM 1



CM 2



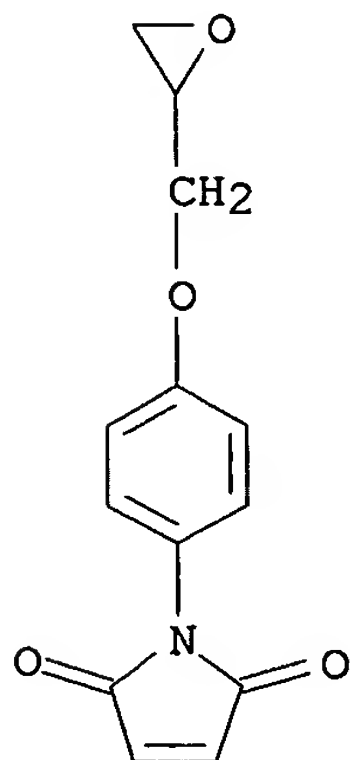
L3 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI)
MF C13 H11 N O4
CI COM



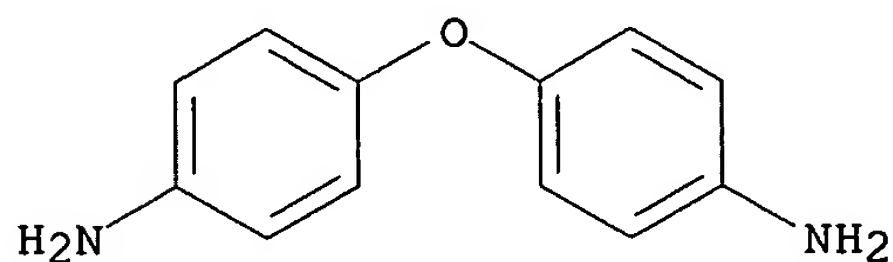
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L3 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
 IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with
 4,4'-oxybis[benzenamine] (9CI)
 MF (C13 H11 N O4 . C12 H12 N2 O)x
 CI PMS

CM 1

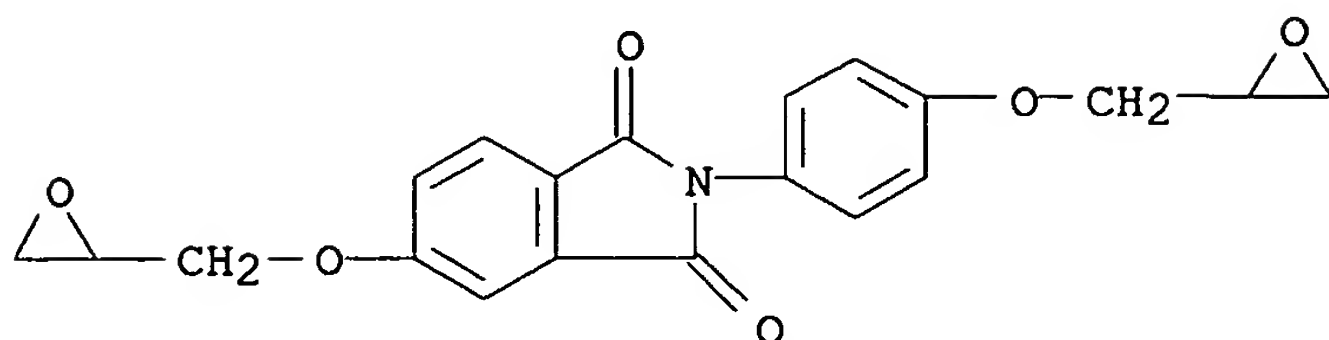


CM 2



L3 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
 IN 1H-Isoindole-1,3(2H)-dione, 5-(oxiranylmethoxy)-2-[4-

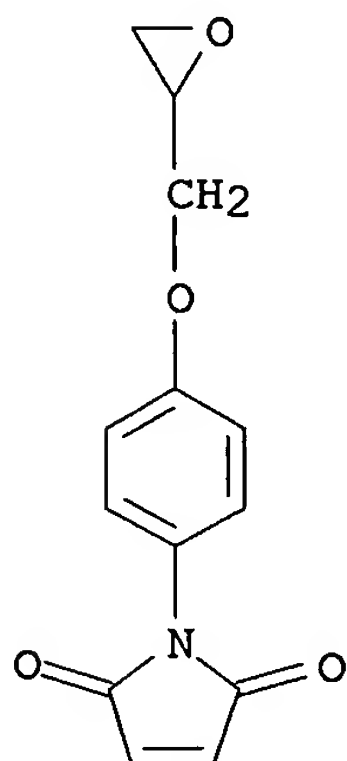
(oxiranylmethoxy)phenyl]- (9CI)
MF C20 H17 N O6



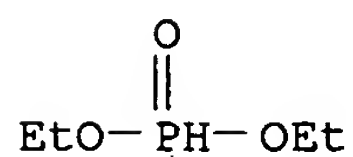
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L3 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN Phosphonic acid, diethyl ester, polymer with 1-[4-(oxiranylmethoxy)phenyl]-
1H-pyrrole-2,5-dione (9CI)
MF (C13 H11 N O4 . C4 H11 O3 P)x
CI PMS

CM 1

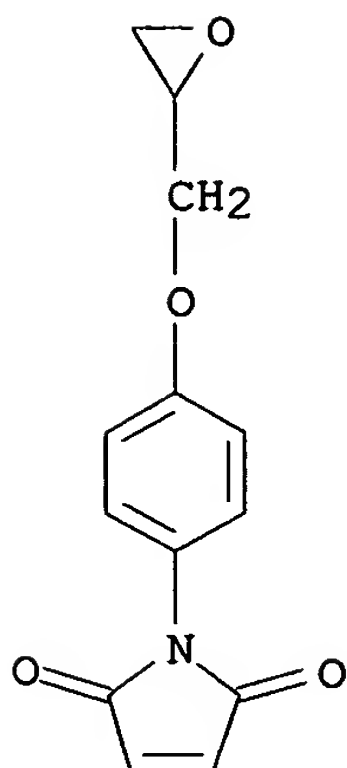


CM 2

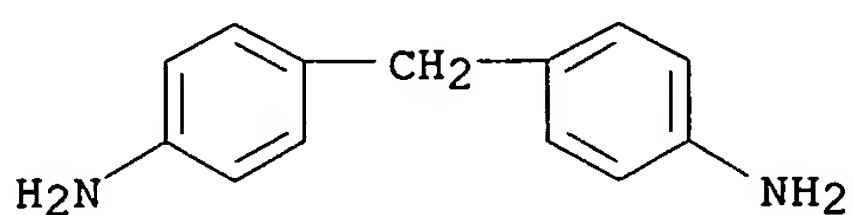


L3 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with
4,4'-methylenebis[benzenamine] (9CI)
MF (C13 H14 N2 . C13 H11 N O4)x
CI PMS

CM 1



CM 2



ALL ANSWERS HAVE BEEN SCANNED

=> s L1 sss full
 FULL SEARCH INITIATED 17:27:17 FILE 'REGISTRY'
 FULL SCREEN SEARCH COMPLETED - 307 TO ITERATE

100.0% PROCESSED 307 ITERATIONS
 SEARCH TIME: 00.00.01

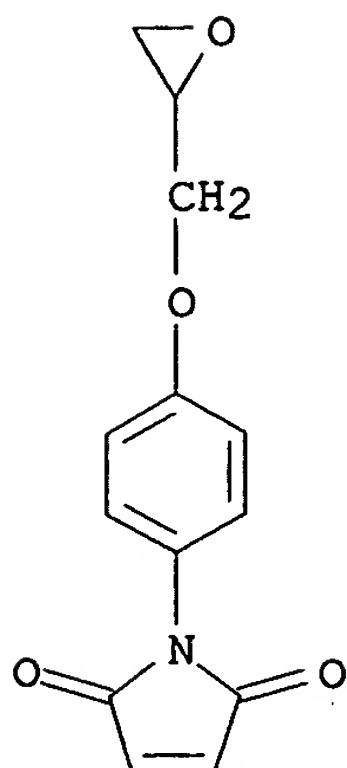
7 ANSWERS

L4 7 SEA SSS FUL L1

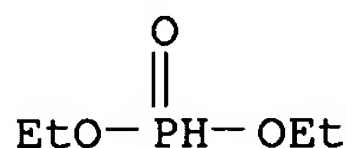
=> d scan 1-7
 '1-7' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

L4 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
 IN Phosphonic acid, diethyl ester, polymer with 1-[4-(oxiranylmethoxy)phenyl]-
 1H-pyrrole-2,5-dione (9CI)
 MF (C13 H11 N O4 . C4 H11 O3 P)x
 CI PMS

CM 1



CM 2



The following are valid formats:

Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN
 SAM - Index Name, MF, and structure - no RN
 FIDE - All substance data, except sequence data
 IDE - FIDE, but only 50 names
 SQIDE - IDE, plus sequence data
 SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
 SQD - Protein sequence data, includes RN
 SQD3 - Same as SQD, but 3-letter amino acid codes are used
 SQN - Protein sequence name information, includes RN

 CALC - Table of calculated properties
 EPROP - Table of experimental properties
 PROP - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract
 APPS -- Application and Priority Information
 BIB -- CA Accession Number, plus Bibliographic Data
 CAN -- CA Accession Number
 CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
 IND -- Index Data
 IPC -- International Patent Classification
 PATS -- PI, SO
 STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB ----- AN, plus Bibliographic Data (original)
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

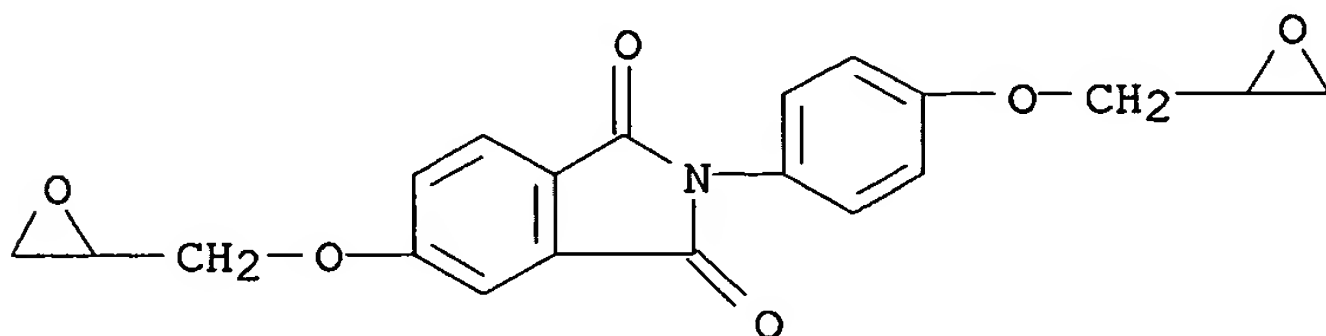
The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):6

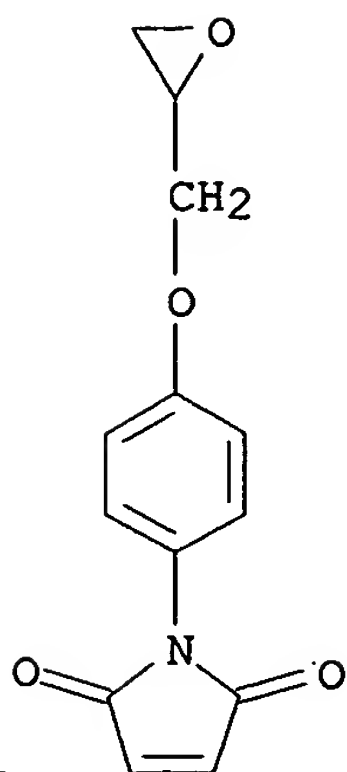
L4 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN 1H-Isoindole-1,3(2H)-dione, 5-(oxiranylmethoxy)-2-[4-(oxiranylmethoxy)phenyl]- (9CI)
MF C20 H17 N O6



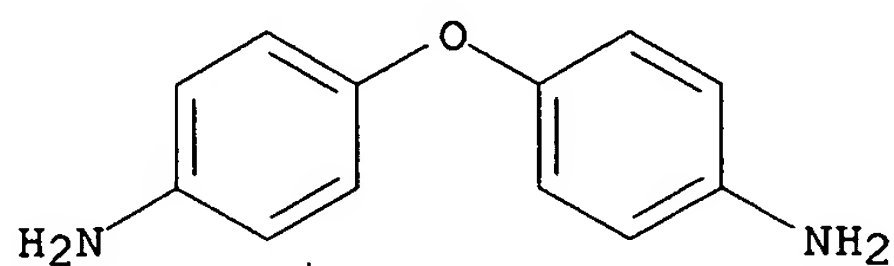
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with
4,4'-oxybis[benzenamine] (9CI)
MF (C13 H11 N O4 . C12 H12 N2 O)x
CI PMS

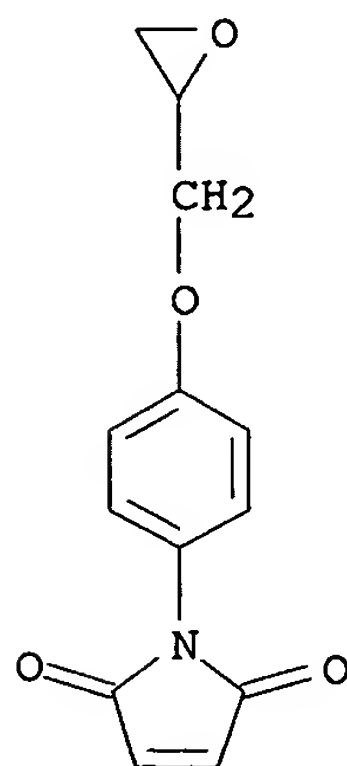
CM 1



CM 2



L4 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
 IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI)
 MF C13 H11 N O4
 CI COM

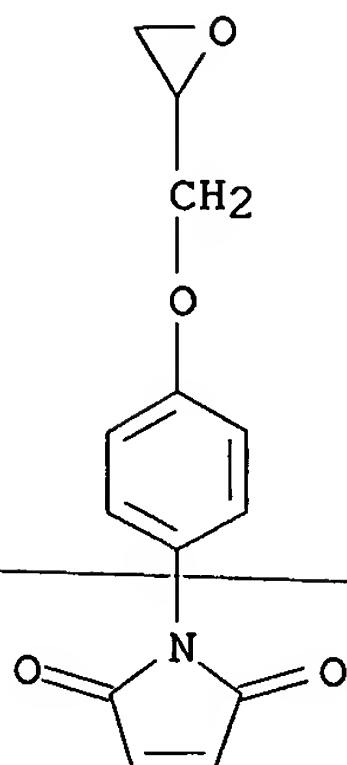


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

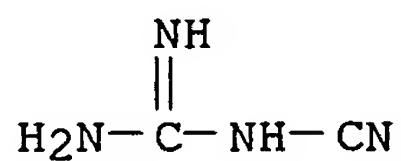
L4 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
 IN Guanidine, cyano-, polymer with 1-[4-(oxiranylmethoxy)phenyl]-1H-pyrrole-
 2,5-dione (9CI)
 MF (C13 H11 N O4 . C2 H4 N4)x

CI PMS

CM 1

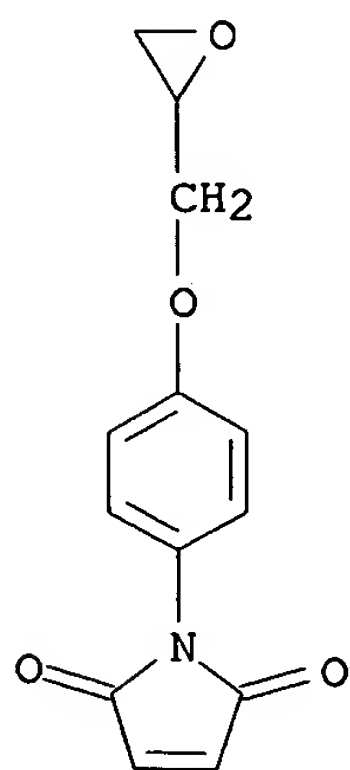


CM 2



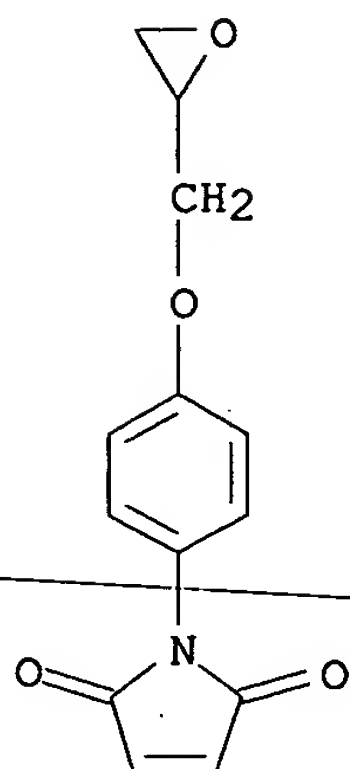
L4 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, homopolymer (9CI)
MF (C13 H11 N O4)x
CI PMS

CM 1

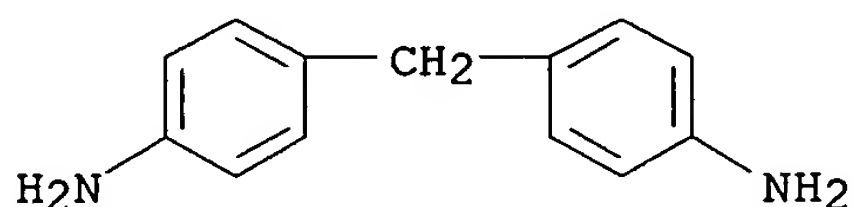


L4 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with
4,4'-methylenebis[benzenamine] (9CI)
MF (C13 H14 N2 . C13 H11 N O4)x
CI PMS

CM 1



CM 2



ALL ANSWERS HAVE BEEN SCANNED

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

312.52

312.73

FILE 'CAPLUS' ENTERED AT 17:28:18 ON 18 NOV 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE COVERS 1907 - 18 Nov 2004 VOL 141 ISS 21

FILE LAST UPDATED: 17 Nov 2004 (20041117/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d ibib abs hitstr
YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:y

'IBIB' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
'ABS' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'
'HITSTR' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

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Substance information can be displayed by requesting individual fields or predefined formats. The predefined substance formats are: (RN = CAS Registry Number)

REG - RN
SAM - Index Name, MF, and structure - no RN
FIDE - All substance data, except sequence data
IDE - FIDE, but only 50 names
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
SQD - Protein sequence data, includes RN
SQD3 - Same as SQD, but 3-letter amino acid codes are used
SQN - Protein sequence name information, includes RN

CALC - Table of calculated properties
EPROP - Table of experimental properties
PROP - EPROP and CALC

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APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB ----- AN, plus Bibliographic Data (original)
OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations
SIBIB ----- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.

The MAX format is the same as ALL.

The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

For additional information, please consult the following help messages:

HELP DFIELDS -- To see a complete list of individual display fields.
HELP FORMATS -- To see detailed descriptions of the predefined formats.

ENTER DISPLAY FORMAT (IDE):end

=> s L4 ibib abs hitstr
MISSING OPERATOR L4 IBIB

The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s L4
L5 8 L4

=> d ibib abs hitstr

L5 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:138009 CAPLUS

DOCUMENT NUMBER: 140:358057

TITLE: Novel thermosetting resins based on
4-(N-maleimidophenyl)glycidylether: II. Bismaleimides
and polybismaleimides

AUTHOR(S): Liu, Ying-Ling; Chen, Yu-Jane

CORPORATE SOURCE: Department of Chemical Engineering, Chung Yuan
Christian University, Taoyuan, 32023, Taiwan

SOURCE: Polymer (2004), 45(6), 1797-1804

CODEN: POLMAG; ISSN: 0032-3861

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Bismaleimides, having epoxy backbone linkages and various bridging groups,
were prepared through reacting 4-(N-maleimidophenyl)glycidyl ether with
various biphenol and silanediol compds. The preparation route provided a
convenient way to introduce specific groups into the bridging groups of
bismaleimides to alter their properties. The bismaleimides prepared in this
study exhibited good solubility, low m.ps., and wide processing windows. The
cured polymers had glass transition temps. above 210° and good
thermal stability (>350°). The silicon-contg polybismaleimides
showed fairly good thermooxidative stability and a low amount of volatiles,
and could be considered as a flame retardant for other polymeric
materials.

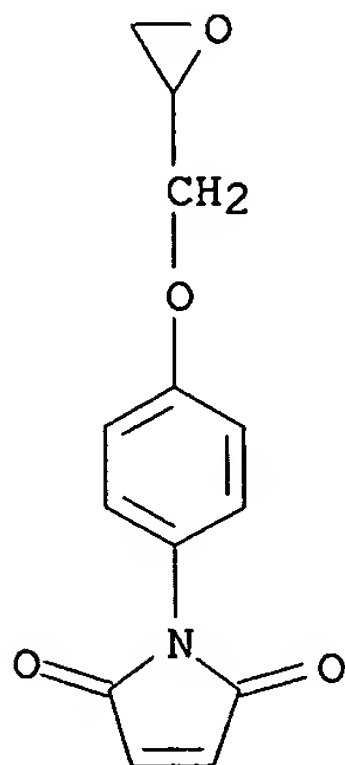
IT 70657-11-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with diols; in preparation of bismaleimides containing epoxy
backbone linkages)

RN 70657-11-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX
NAME)



*both of our inventors
(all)
doesn't beat 7/11/03
app date*

REFERENCE COUNT:

41

THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib abs hitstr 2-7

L5 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:728543 CAPLUS

DOCUMENT NUMBER: 139:396402

TITLE: Novel thermosetting resins based on
4-(N-maleimidophenyl)glycidyl ether. I. Preparation
and characterization of monomer and cured resins

AUTHOR(S): Liu, Ying-Ling; Chen, Yu-Jane; Wei, Wen-Lung

CORPORATE SOURCE: Chungli, Pu-Jen, 22, Department of Chemical
Engineering, Chung Yuan Christian University, Taoyuan,
Taiwan, 320, Peop. Rep. China

SOURCE: Polymer (2003), 44(21), 6465-6473

CODEN: POLMAG; ISSN: 0032-3861

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A hybrid monomer of 4-(N-maleimidophenyl) glycidyl ether (MPGE), which
possesses both oxirane ring and maleimide curable groups, was first
synthesized from N-(4-hydroxyphenyl)maleimide and epichlorohydrin using
benzyltrimethylammonium chloride as a catalyst. MPGE was then cured with
amine compds., i.e., 4,4-diaminodiphenylmethane and dicyandiamide, and
di-Et phosphite (DEP) to result in crosslinking networks. The curing
kinetics and mechanisms were studied. High glass transition temps., good
thermal stability, and attractive flame retardance were observed for the
prepared resins. The thermal and flame retardant properties of the cured
resins were further enhanced by using DEP as the curing agent, which
incorporated phosphorus into the cured resins.

IT 149829-32-3P 626256-10-8P 626256-11-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crosslinked; preparation and characterization of thermosetting resins based
on 4-(N-maleimidophenyl)glycidyl ether)

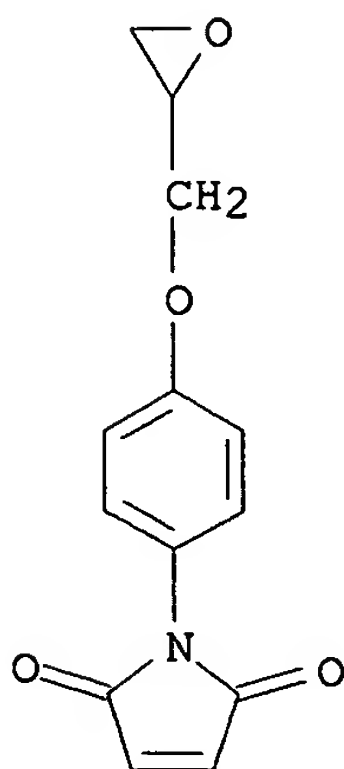
RN 149829-32-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with
4,4'-methylenebis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 70657-11-3

CMF C13 H11 N O4



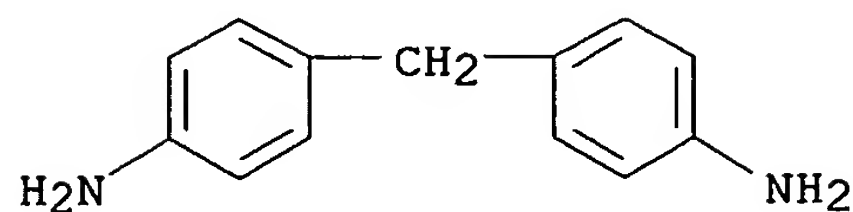
*our inventor
Liu, Chen
plus one more
Wei
needs to
predict
7/19/03*

Oct 2003 issue

CM 2

CRN 101-77-9

CMF C13 H14 N2



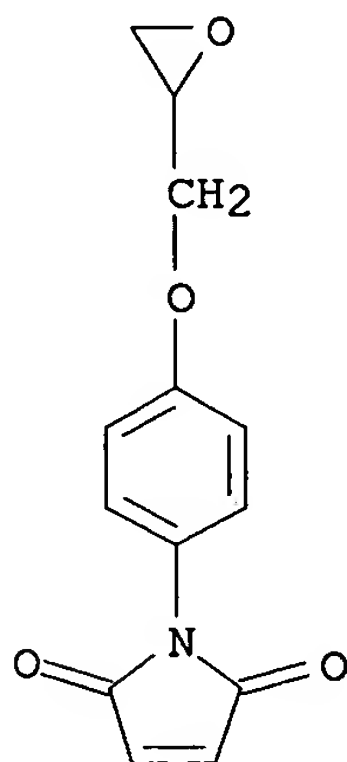
RN 626256-10-8 CAPLUS

CN Guanidine, cyano-, polymer with 1-[4-(oxiranylmethoxy)phenyl]-1H-pyrrole-2,5-dione (9CI) (CA INDEX NAME)

CM 1

CRN 70657-11-3

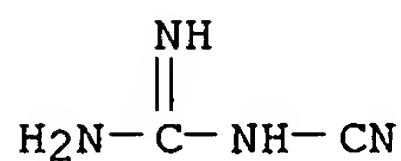
CMF C13 H11 N O4



CM 2

CRN 461-58-5

CMF C2 H4 N4



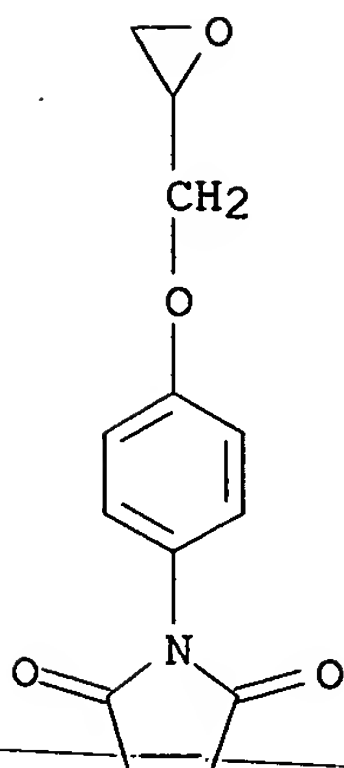
RN 626256-11-9 CAPLUS

CN Phosphonic acid, diethyl ester, polymer with 1-[4-(oxiranylmethoxy)phenyl]-1H-pyrrole-2,5-dione (9CI) (CA INDEX NAME)

CM 1

CRN 70657-11-3

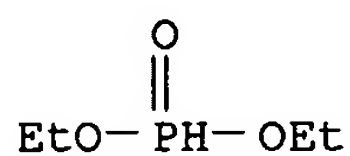
CMF C13 H11 N O4



CM 2

CRN 762-04-9

CMF C4 H11 O3 P

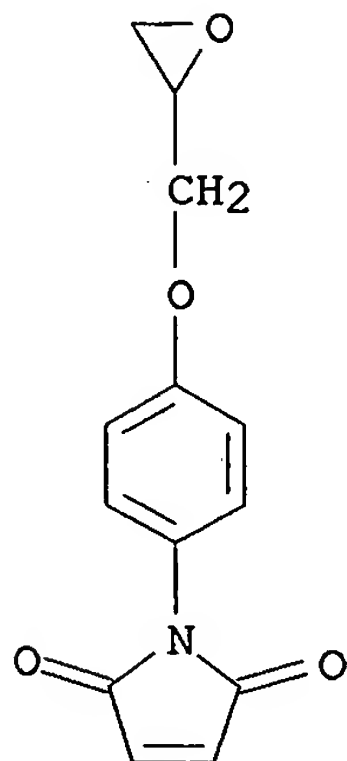


IT 70657-11-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(monomer; for preparation of thermosetting resins)

RN 70657-11-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiran-2-ylmethoxy)phenyl]- (9CI) (CA INDEX
NAME)



REFERENCE COUNT:

41

THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

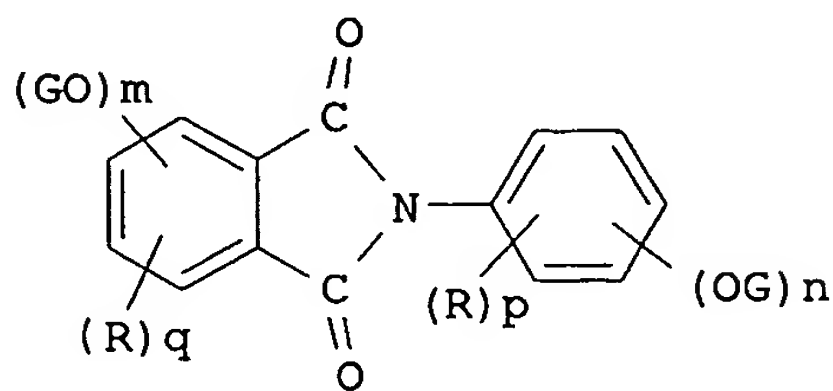
ACCESSION NUMBER: 1998:479926 CAPLUS

DOCUMENT NUMBER: 129:190041

TITLE: (Hydroxyphenyl)hydroxyphthalimides, their epoxy

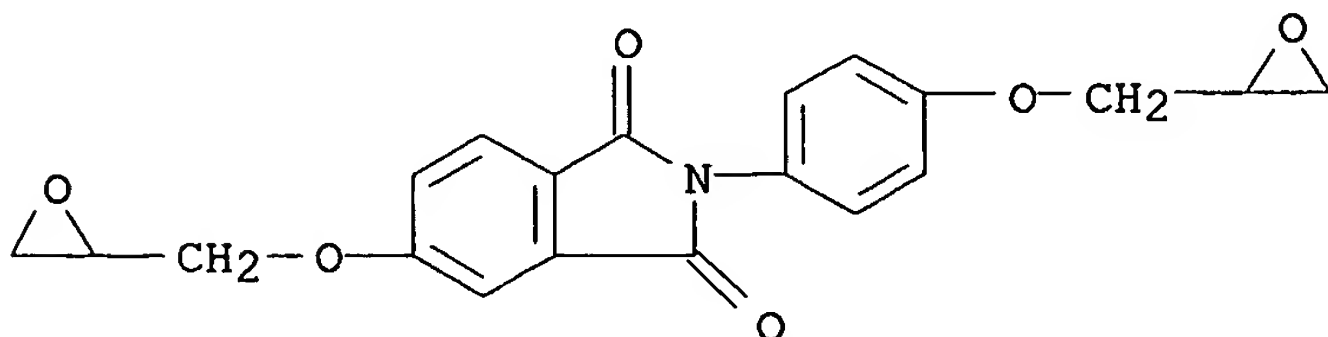
derivatives, and thermosetting resin compositions with
 good heat resistance and electric properties
 INVENTOR(S): Hasegawa, Yoshikazu; Kajiwara, Yoshitaka; Oshimi,
 Katsuhiko; Kogo, Makiko
 PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10195050	A2	19980728	JP 1997-11944	19970107
PRIORITY APPLN. INFO.:			JP 1997-11944	19970107
OTHER SOURCE(S):			MARPAT 129:190041	
GI				



*not quite possible 103
2nd range
ref*

- AB Resin compns. for electronic part sealing or laminated sheets contain (A) N-(hydroxyphenyl)hydroxyphthalimides I (R = alkyl, alkylene, aralkyl, aryl, halo, alkoxy; G = H; m, n = 1-2; p, q = 0-3), epoxy resins, and inorg. fillers or (B) I (G = 2,3-epoxypropyl) or their reaction products with I (G = H), hardeners, and inorg. fillers. Epoxy resins are manufactured by reacting I (G = H) with epihalohydrins and alkalies. Thus, imidation of 4-hydroxyphthalic acid with 4-aminophenol gave I [R = H, (OG)m = (OG)n = 4-OH], which was reacted with epichlorohydrin and Me₃N-HCl in dioxane at 70-80° for 6 h to give I [R = H, (OG)m = (OG)n = 4-(2,3-epoxypropyl)] (II). A cured product from II, phenol novolak, and PPh₃ showed Tg 175°.
- IT **211694-85-8DP**, polymers with phenol novolaks
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (preparation of phthalimide-containing epoxy resins for heat-resistant electronic part sealing compns. or laminated sheets)
- RN 211694-85-8 CAPLUS
- CN 1H-Isoindole-1,3(2H)-dione, 5-(oxiranylmethoxy)-2-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



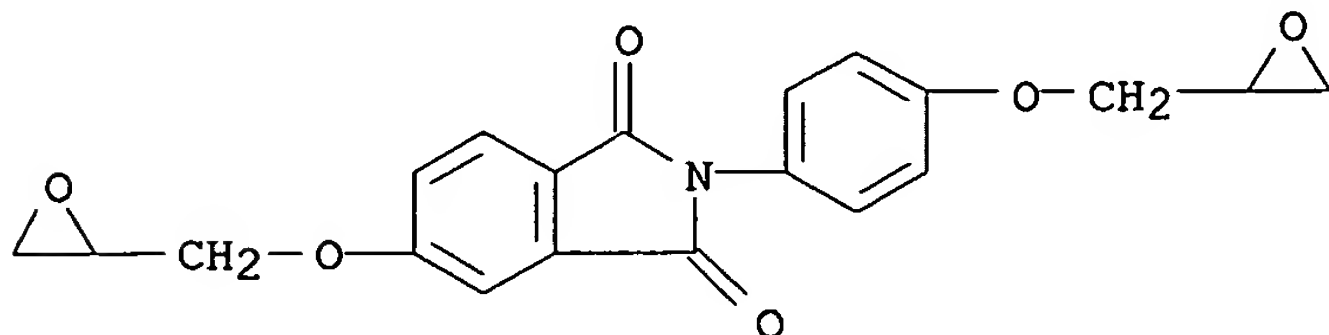
- IT **211694-85-8P**
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)

(preparation of phthalimide-containing epoxy resins for heat-resistant electronic part sealing compns. or laminated sheets)

RN 211694-85-8 CAPLUS

CN 1H-Isoindole-1,3(2H)-dione, 5-(oxiranylmethoxy)-2-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



L5 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:268486 CAPLUS

DOCUMENT NUMBER: 128:308914

TITLE: Crosslinkers for optical polycarbonates

INVENTOR(S): Boonstra, Tjerk Oedse; Van Olden, David; Woudenberg, Richard Herman

PATENT ASSIGNEE(S): Akzo Nobel N.V., Neth.; Boonstra, Tjerk Oedse; Van Olden, David; Woudenberg, Richard Herman

SOURCE: PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9817644	A1	19980430	WO 1997-EP5674	19971009
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
CA 2269583	AA	19980430	CA 1997-2269583	19971009
AU 9748672	A1	19980515	AU 1997-48672	19971009
EP 934266	A1	19990811	EP 1997-911222	19971009
R:	DE, FR, GB			
JP 2001503040	T2	20010306	JP 1998-518913	19971009
US 6232430	B1	20010515	US 1999-284886	19990804
PRIORITY-APPLN. INFO.:			EP 1996-202951	A 19961023
			US 1996-31541P	P 19961202
			EP 1996-202851	A 19961023
			WO 1997-EP5674	W 19971009

OTHER SOURCE(S): MARPAT 128:308914

AB The title crosslinkers comprise R2(p-C6H4)n(CO2CH2)mR [n is 0 or 1; m is 0 or 1; R is CH2CH(OH)CH2OH or C6H3R12; R1 is independently OH or -CO2(hydroxyphenyl); R2 is N-bonded maleimide], with the proviso that 3,4-dihydroxyphenylmaleimide is excluded. A polycarbonate was prepared from a carbonate monomer, a diol and a crosslinker (e.g., dihydroxypropyl maleimide).

IT 70657-11-3P

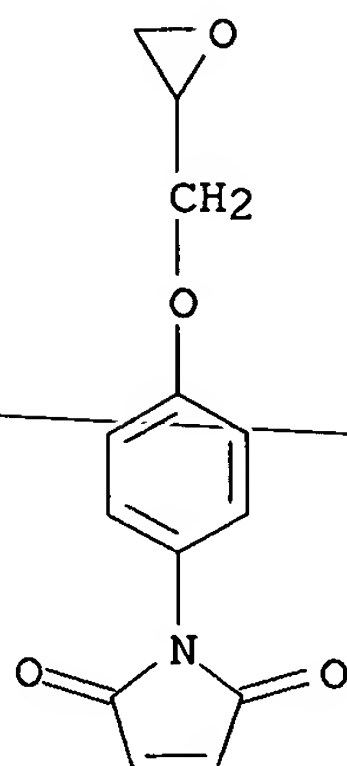
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT

(Reactant or reagent)

(crosslinkers for optical polycarbonates)

RN 70657-11-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:540354 CAPLUS

DOCUMENT NUMBER: 119:140354

TITLE: Thermal behavior of 4-maleimidophenyl glycidyl ether resins

AUTHOR(S): Choudhary, Lalita; Varma, D. S.; Wang, Francis W.; Choudhary, Veena; Varma, I. K.

CORPORATE SOURCE: Centre for Materials Science and Technology, Indian Institute of Technology Delhi, Hauz Khas, New, Delhi-110016, India

SOURCE: Thermochimica Acta (1993), 220(1-2), 261-70
CODEN: THACAS; ISSN: 0040-6031

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The title resins (I) were prepared from 4-aminophenol, maleic anhydride, and epichlorohydrin and characterized. Characterization was carried out by estimation of the epoxy equivalent and by IR and 1H-NMR spectroscopy. I were cured

by heating at >250°. A decrease in the curing temperature was observed after the addition of a stoichiometric or non-stoichiometric amount of an aromatic

diamine. The values of the curing temperature and the heat of the polymerization

reaction were independent of diamine concentration but depended on the structure

of the diamine. The char yields of cured I at 800° in N were 25-40%, which was much higher than values reported for epoxy resins.

IT 149829-34-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and curing characteristics of)

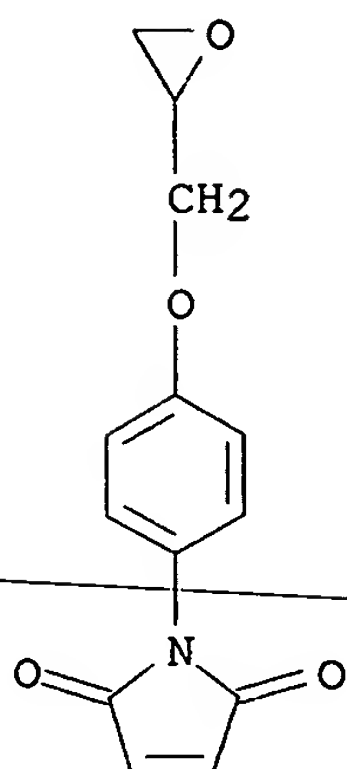
RN 149829-34-5 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, homopolymer (9CI)
(CA INDEX NAME)

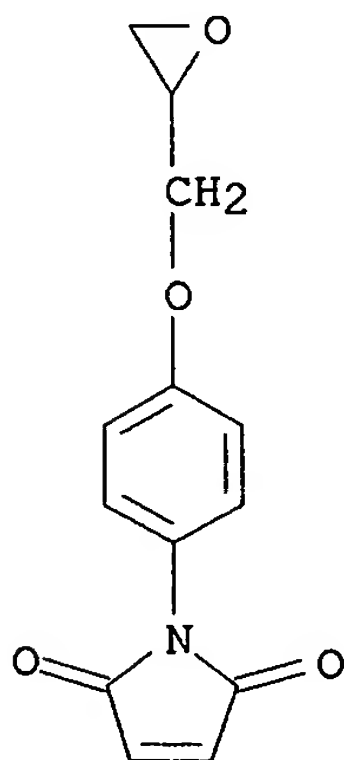
CM 1

yes
June 1993
abstract

CRN 70657-11-3
CMF C13 H11 N O4



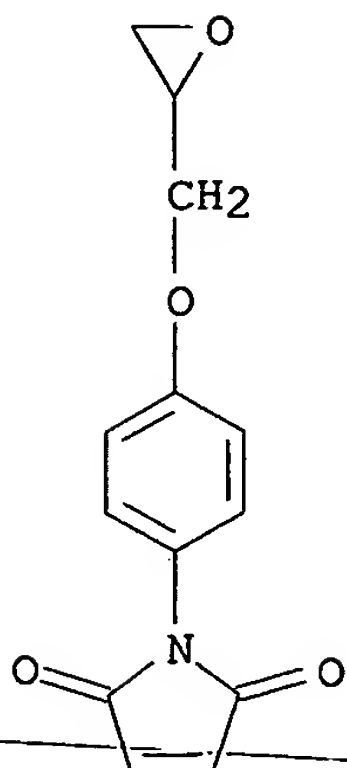
IT **70657-11-3P**
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(preparation and polymerization of)
RN 70657-11-3 CAPLUS
CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



IT **149829-32-3P 149829-33-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and thermal properties of cured)
RN 149829-32-3 CAPLUS
CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with 4,4'-methylenebis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

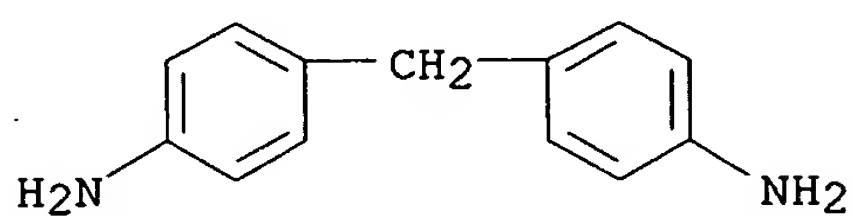
CRN 70657-11-3
CMF C13 H11 N O4



CM 2

CRN 101-77-9

CMF C13 H14 N2



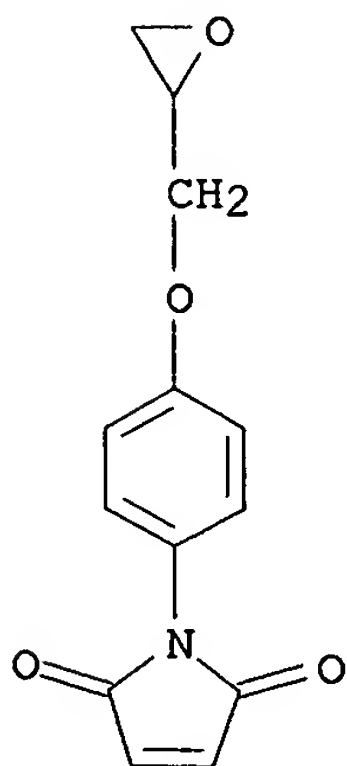
RN 149829-33-4 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with 4,4'-oxybis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 70657-11-3

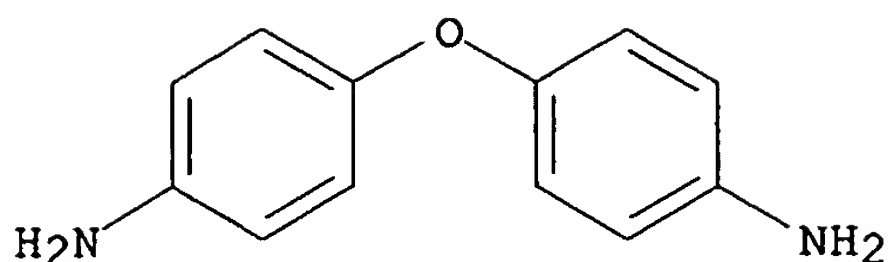
CMF C13 H11 N O4



CM 2

CRN 101-80-4

CMF C12 H12 N2 O

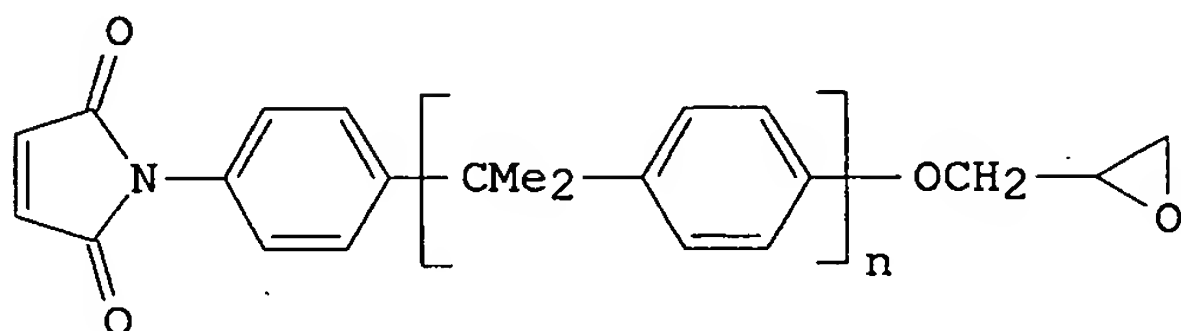


L5 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1992:552203 CAPLUS
 DOCUMENT NUMBER: 117:152203
 TITLE: Modified polyolefin-containing thermoplastic resin compositions
 INVENTOR(S): Iwata, Ineo; Ueki, Toru; Yoshimura, Masaji; Kishi, Susumu
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

Yes

*found in EAP
in Japanese*

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04122754	A2	19920423	JP 1990-242608	19900914
PRIORITY APPLN. INFO.: GI			JP 1990-242608	19900914



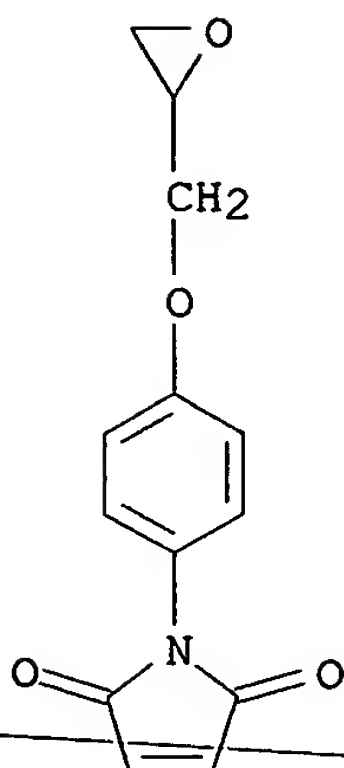
I

AB The title compns. with excellent mech. properties comprise (A) 5-95% mixts. of polyolefins and modified polyolefins prepared by treating 100 parts polyolefins with 0.1-20 parts imides I (n = 0, 1) in presence of 0.01-10 parts radical generators and (B) 5-95% polyesters, polycarbonates, and/or poly(phenylene sulfides). Thus, kneading a mixture of Noblen 100, I (n = 0) 1, and dicumyl peroxide 0.1 part at 200° gave modified resin, 15 parts of which was blended with 10 parts Noblen and 75 parts TRB-H. Then, the composition was kneaded, pelletized, and injection molded to give a test piece showing Izod impact strength 7 kg-cm/cm, tensile strength 450 kg/cm², and elongation 40%.

IT 70657-11-3D, reaction products with polyolefins
 RL: USES (Uses)
 (thermoplastic resin compns. containing, with good mech. strength)

RN 70657-11-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



L5 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:449452 CAPLUS

DOCUMENT NUMBER: 117:49452

TITLE: Preparation of imide-modified polyolefins with improved adhesion to glass fibers, metals, and ethylene-vinyl alcohol copolymer

INVENTOR(S): Yoshimura, Masaji; Ueki, Toru; Kishi, Susumu; Iwata, Ineo

PATENT ASSIGNEE(S): Mitsui Toatsu Kagaku K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04057812	A2	19920225	JP 1990-168375	19900628
PRIORITY APPLN. INFO.:			JP 1990-168375	19900628

AB Title polyolefins are prepared by treating 100 parts polyolefins with 0.1-20 parts N-[4-(2,3-epoxypropoxy)phenyl]maleimide (I) or 2-[4-(2,3-epoxypropoxy)phenyl]-2-(4-maleimidophenyl)propane in the presence of 0.01-10 parts radical generators. Thus, Noblen (polypropylene) 100, I 15, and dicumyl peroxide 0.1 part were mixed and screw extruded at 200° to obtain pellets, which were set on an Al plate and hot pressed to give a test piece showing 180° peel strength 20 kg (23°).

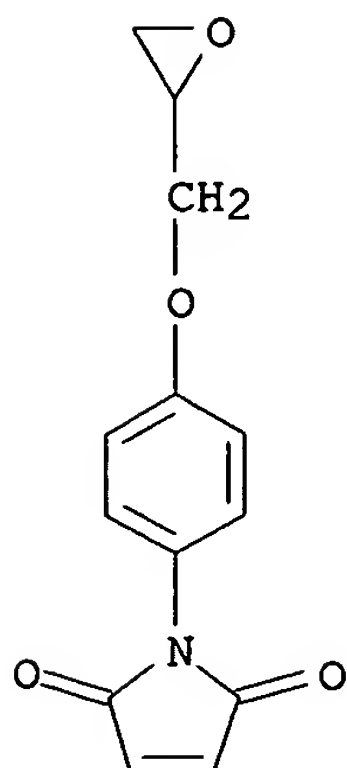
IT 70657-11-3DP, polyolefins modified with

RL: PREP (Preparation)

(preparation of, with good adhesion to glass fibers and metals and ethylene vinyl alc. copolymer)

RN 70657-11-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



=> d ibib abs hitstr 8

L5 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1979:458140 CAPLUS
 DOCUMENT NUMBER: 91:58140
 TITLE: Thermosetting resin compositions
 INVENTOR(S): Nishikawa, Akio; Segawa, Masanori; Yokono, Tadashi
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

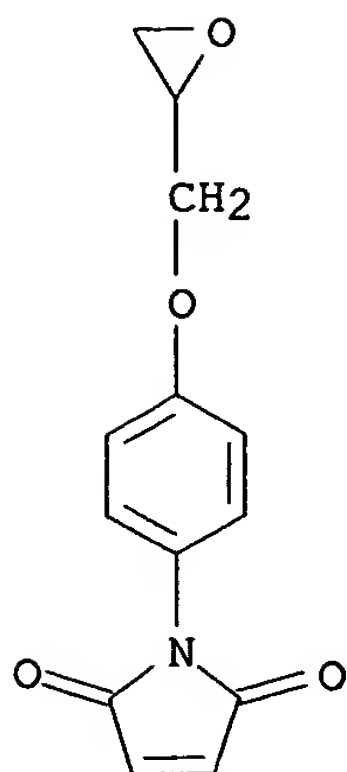
Yes

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54004997	A2	19790116	JP 1977-69848	19770615
PRIORITY APPLN. INFO.:			JP 1977-69848	19770615

AB Soluble and readily curable thermosetting resin compns. consist of N-(glycidyoxy)maleimide (I) [69861-04-7], N-(glycidyoxyethyl)maleimide [70657-12-4], or N-(p-glycidyoxyphenyl)maleimide [70657-11-3], an amine such as 4,4'-diaminodiphenylmethane (II) [101-77-9] or 4,4'-diaminodiphenyl ether, and an epoxy compound. Thus, I 100, II 5-60, EP 828 50-200, dicyandiamide 5, Et3N tetraphenylborate 3, stearic acid 2, epoxy silane 1, and powdered SiO2 382 parts were roll-blended at 70-80° to give a molding composition.

IT **70657-11-3**
 RL: USES (Uses)
 (molding compns., containing epoxy resins and aromatic diamines, rapid-curing)

RN 70657-11-3 CAPLUS
 CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



=> fil reg

COST IN U.S. DOLLARS

SINCE FILE
ENTRY

TOTAL
SESSION

FULL ESTIMATED COST

43.80

357.39

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE
ENTRY

TOTAL
SESSION

CA SUBSCRIBER PRICE

-5.60

-5.60

FILE 'REGISTRY' ENTERED AT 17:36:16 ON 18 NOV 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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STRUCTURE FILE UPDATES: 17 NOV 2004 HIGHEST RN 783276-57-3

DICTIONARY FILE UPDATES: 17 NOV 2004 HIGHEST RN 783276-57-3

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

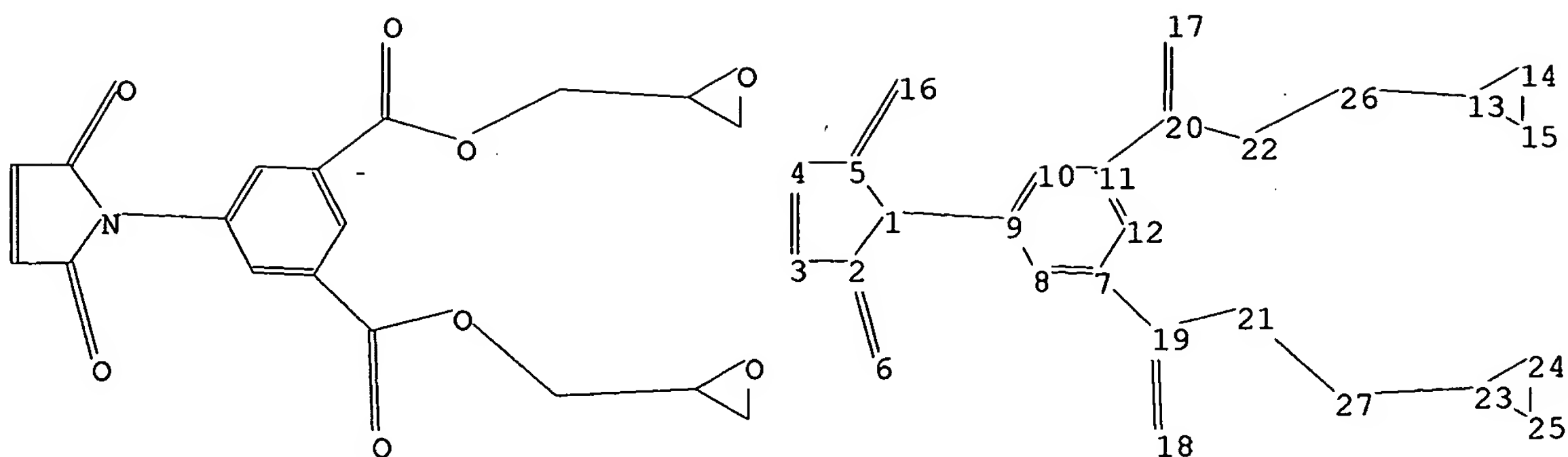
Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\maleimideepoxide3.str



chain nodes :

6 16 17 18 19 20 21 22 26 27

ring nodes :

1 2 3 4 5 7 8 9 10 11 12 13 14 15 23 24 25

chain bonds :

1-9 2-6 5-16 7-19 11-20 13-26 17-20 18-19 19-21 20-22 21-27 22-26 23-27

ring bonds :

1-2 1-5 2-3 3-4 4-5 7-8 7-12 8-9 9-10 10-11 11-12 13-14 13-15 14-15
23-24 23-25 24-25

exact/norm bonds :

1-2 1-5 1-9 2-3 2-6 3-4 4-5 5-16 13-14 13-15 14-15 17-20 18-19 19-21
20-22 21-27 22-26 23-24 23-25 24-25

exact bonds :

7-19 11-20 13-26 23-27

normalized bonds :

7-8 7-12 8-9 9-10 10-11 11-12

Match level :

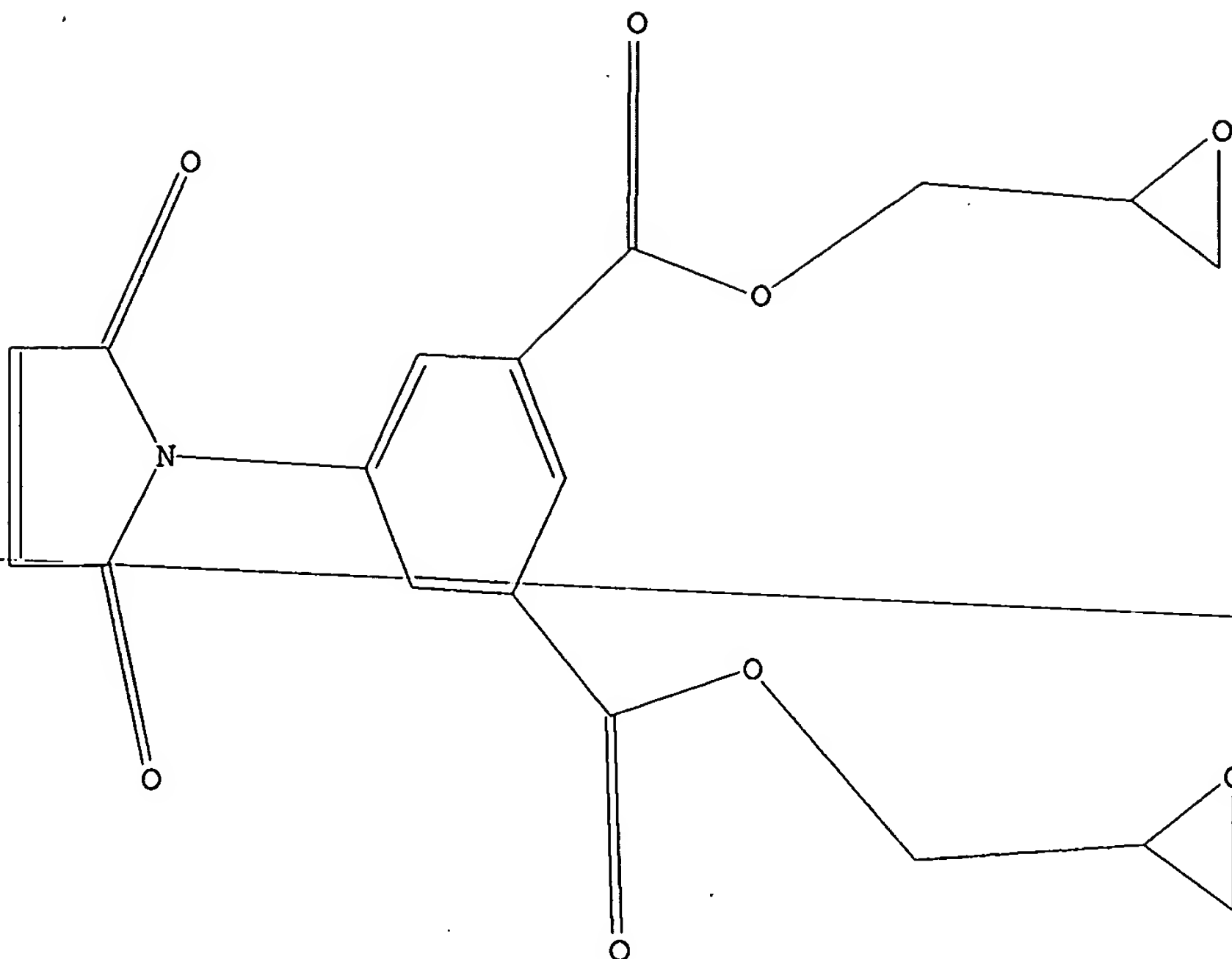
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11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:CLASS 17:CLASS 18:CLASS 19:CLASS
20:CLASS 21:CLASS 22:CLASS 23:Atom 24:Atom 25:Atom 26:CLASS 27:CLASS

L6 STRUCTURE UPLOADED

=> d

L6 HAS NO ANSWERS

L6 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 exa full

FULL SEARCH INITIATED 17:37:12 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 4 TO ITERATE

100.0% PROCESSED 4 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

L7

2 SEA EXA FUL L1

=> s L1 sss full

FULL SEARCH INITIATED 17:37:29 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 307 TO ITERATE

100.0% PROCESSED 307 ITERATIONS

7 ANSWERS

SEARCH TIME: 00.00.01

L8

7 SEA SSS FUL L1

=> d scan

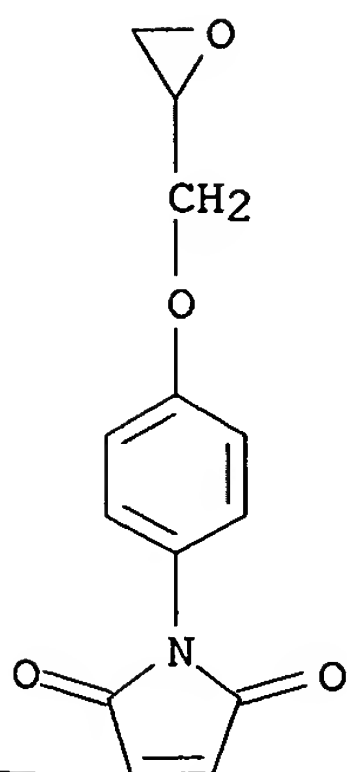
L8 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN

IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with
4,4'-oxybis[benzenamine] (9CI)

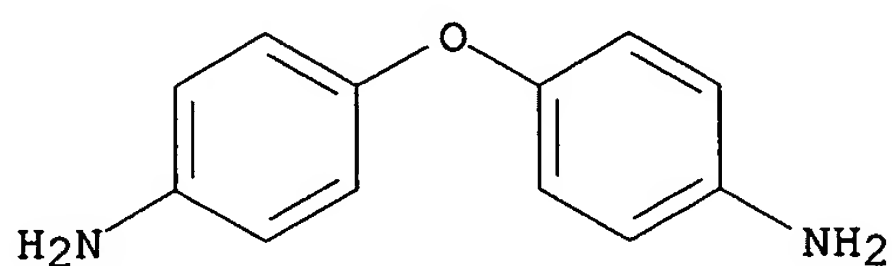
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CI PMS

CM 1

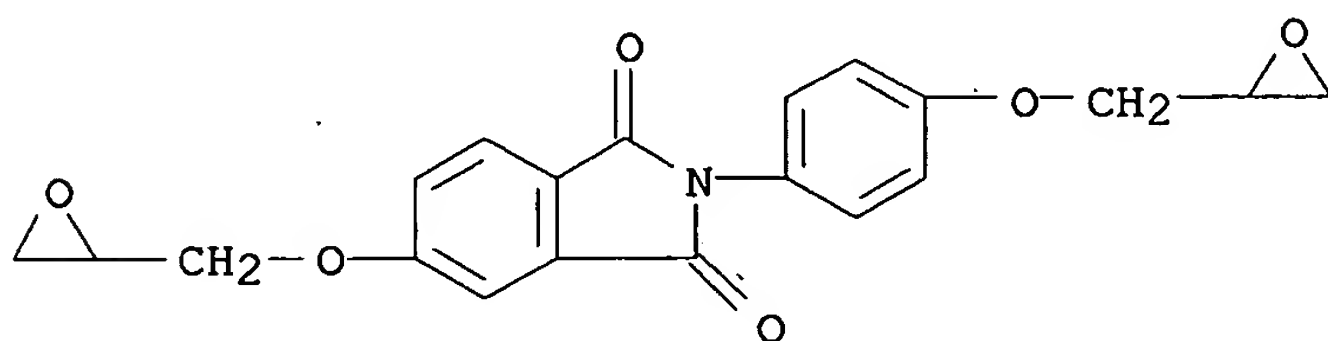


CM 2



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):6

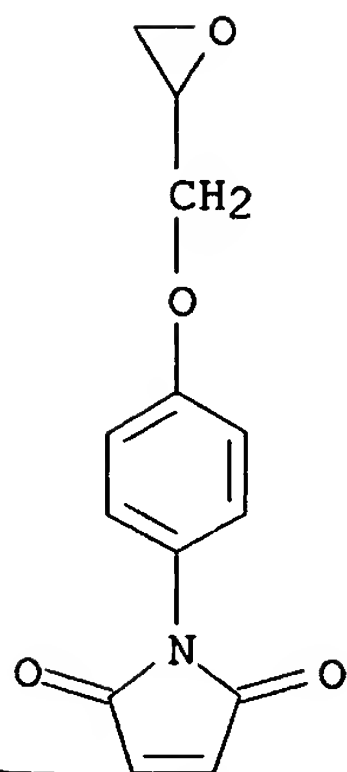
L8 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
 IN 1H-Isoindole-1,3(2H)-dione, 5-(oxiran-2-ylmethoxy)-2-[4-(oxiran-2-ylmethoxy)phenyl]- (9CI)
 MF C20 H17 N O6



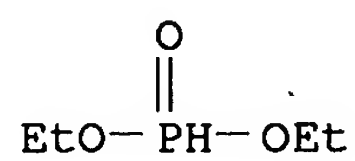
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L8 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
 IN Phosphonic acid, diethyl ester, polymer with 1-[4-(oxiran-2-ylmethoxy)phenyl]-1H-pyrrole-2,5-dione (9CI)
 MF (C13 H11 N O4 . C4 H11 O3 P)x
 CI PMS

CM 1

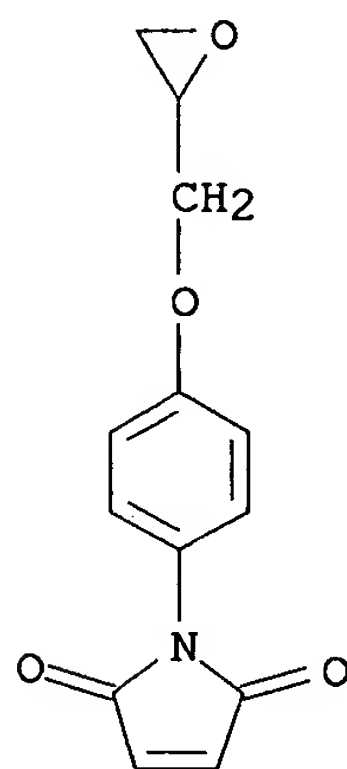


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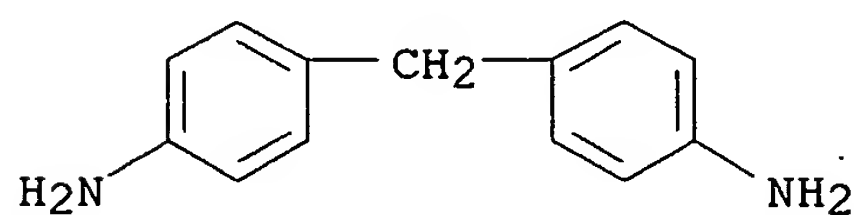


L8 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
 IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with
 4,4'-methylenebis[benzenamine] (9CI)
 MF (C13 H14 N2 . C13 H11 N O4)x
 CI PMS

CM 1

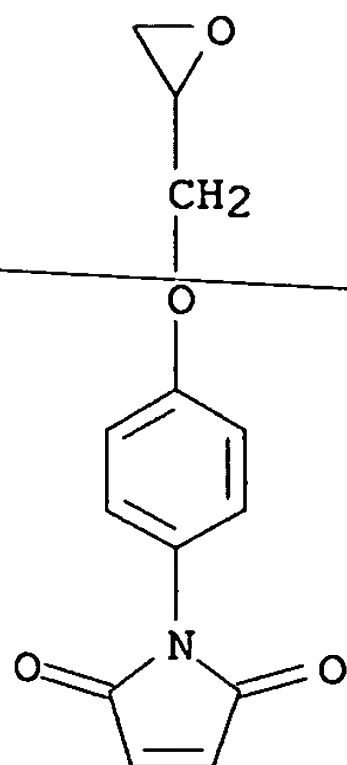


CM 2



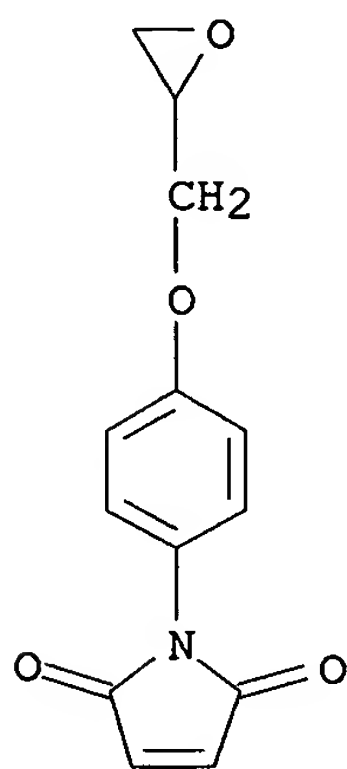
L8 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
 IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, homopolymer (9CI)
 MF (C13 H11 N O4)x
 CI PMS

CM 1

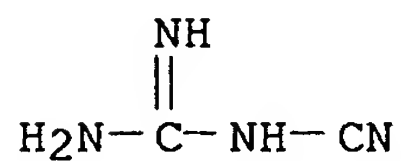


L8 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
 IN Guanidine, cyano-, polymer with 1-[4-(oxiranylmethoxy)phenyl]-1H-pyrrole-2,5-dione (9CI)
 MF (C13 H11 N O4 . C2 H4 N4)x
 CI PMS

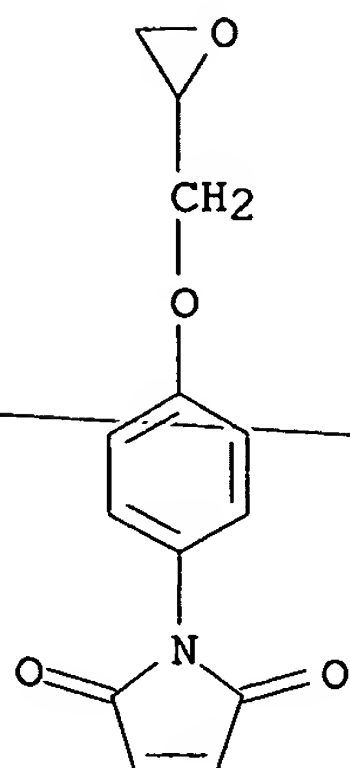
CM 1



CM 2



L8 7 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI)
MF C13 H11 N O4
CI COM



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> fil caplus; s L8
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
208.93	566.32

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-5.60

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FILE COVERS 1907 - 18 Nov 2004 VOL 141 ISS 21
FILE LAST UPDATED: 17 Nov 2004 (20041117/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

L9

8 L8

=> d ibib abs hitstr L8 1-8

YOU HAVE REQUESTED DATA FROM FILE 'REGISTRY' - CONTINUE? (Y)/N:n

=> d ibib abs hitstr L9 1-8

*our invention
(all)*

L9 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:138009 CAPLUS

DOCUMENT NUMBER: 140:358057

TITLE: Novel thermosetting resins based on
4-(N-maleimidophenyl)glycidylether: II. Bismaleimides
and polybismaleimides

AUTHOR(S.): Liu, Ying-Ling; Chen, Yu-Jane

CORPORATE SOURCE: Department of Chemical Engineering, Chung Yuan
Christian University, Taoyuan, 32023, Taiwan

SOURCE: Polymer (2004), 45(6), 1797-1804

CODEN: POLMAG; ISSN: 0032-3861

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Bismaleimides, having epoxy backbone linkages and various bridging groups, were prepared through reacting 4-(N-maleimidophenyl)glycidyl ether with various biphenol and silanediol compds. The preparation route provided a convenient way to introduce specific groups into the bridging groups of bismaleimides to alter their properties. The bismaleimides prepared in this study exhibited good solubility, low m.ps., and wide processing windows. The cured polymers had glass transition temps. above 210° and good thermal stability (>350°). The silicon-contg polybismaleimides showed fairly good thermooxidative stability and a low amount of volatiles and could be considered as a flame retardant for other polymeric materials.

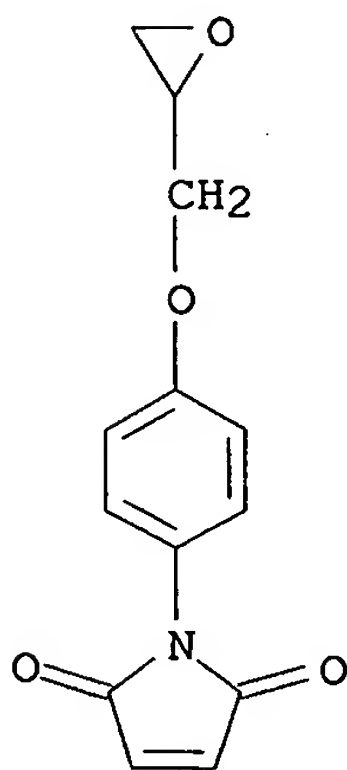
IT 70657-11-3

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with diols; in preparation of bismaleimides containing epoxy backbone linkages)

RN 70657-11-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

41

THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:728543 CAPLUS

DOCUMENT NUMBER: 139:396402

TITLE: Novel thermosetting resins based on
4-(N-maleimidophenyl)glycidyl ether. I. Preparation
and characterization of monomer and cured resins

AUTHOR(S): Liu, Ying-Ling; Chen, Yu-Jane; Wei, Wen-Lung

CORPORATE SOURCE: Chungli, Pu-Jen, 22, Department of Chemical
Engineering, Chung Yuan Christian University, Taoyuan,
Taiwan, 320, Peop. Rep. China

SOURCE: Polymer (2003), 44(21), 6465-6473

CODEN: POLMAG; ISSN: 0032-3861

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A hybrid monomer of 4-(N-maleimidophenyl) glycidyl ether (MPGE), which possesses both oxirane-ring-and-maleimide curable groups, was first synthesized from N-(4-hydroxyphenyl)maleimide and epichlorohydrin using benzyltrimethylammonium chloride as a catalyst. MPGE was then cured with amine compds., i.e., 4,4-diaminodiphenylmethane and dicyandiamide, and di-Et phosphite (DEP) to result in crosslinking networks. The curing kinetics and mechanisms were studied. High glass transition temps., good thermal stability, and attractive flame retardance were observed for the prepared resins. The thermal and flame retardant properties of the cured resins were further enhanced by using DEP as the curing agent, which incorporated phosphorus into the cured resins.

IT 149829-32-3P 626256-10-8P 626256-11-9P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(crosslinked; preparation and characterization of thermosetting resins based
on 4-(N-maleimidophenyl)glycidyl ether)

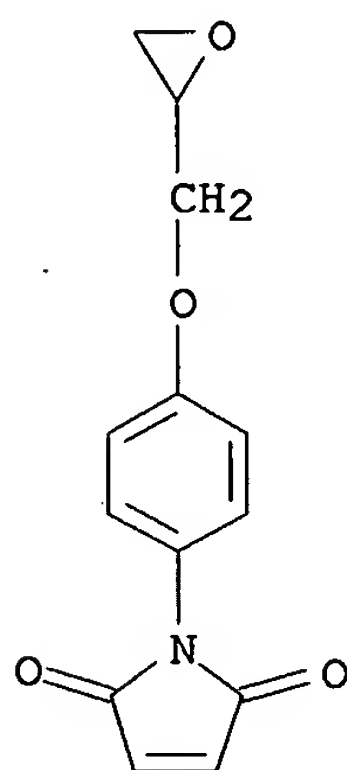
RN 149829-32-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with
4,4'-methylenebis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 70657-11-3

CMF C13 H11 N O4

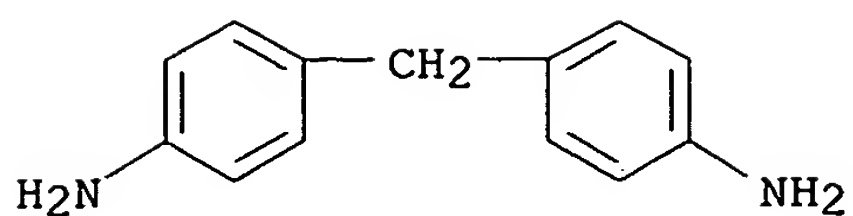


CM 2

CRN 101-77-9

CMF C13 H14 N2

*our inventors
plus,
Wei*



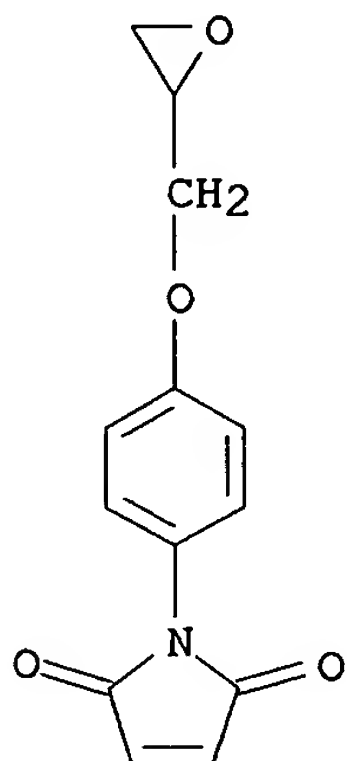
RN 626256-10-8 CAPLUS

CN Guanidine, cyano-, polymer with 1-[4-(oxiranylmethoxy)phenyl]-1H-pyrrole-2,5-dione (9CI) (CA INDEX NAME)

CM 1

CRN 70657-11-3

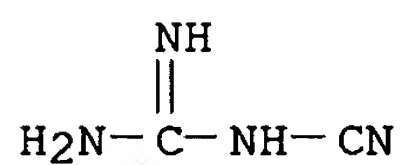
CMF C13 H11 N O4



CM 2

CRN 461-58-5

CMF C2 H4 N4



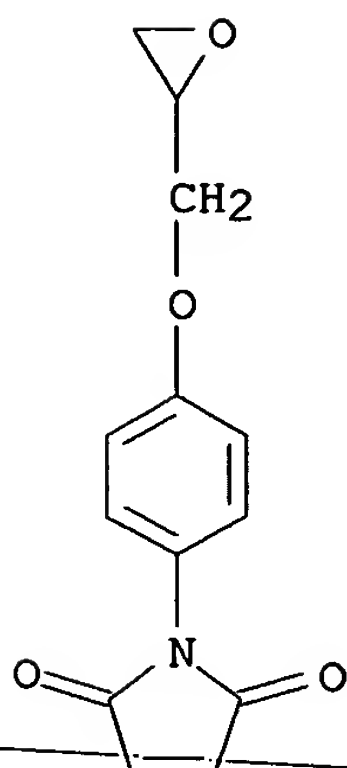
RN 626256-11-9 CAPLUS

CN Phosphonic acid, diethyl ester, polymer with 1-[4-(oxiranylmethoxy)phenyl]-1H-pyrrole-2,5-dione (9CI) (CA INDEX NAME)

CM 1

CRN 70657-11-3

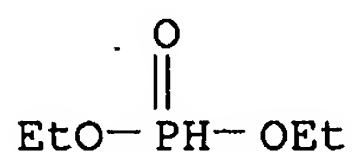
CMF C13 H11 N O4



CM 2

CRN 762-04-9

CMF C4 H11 O3 P

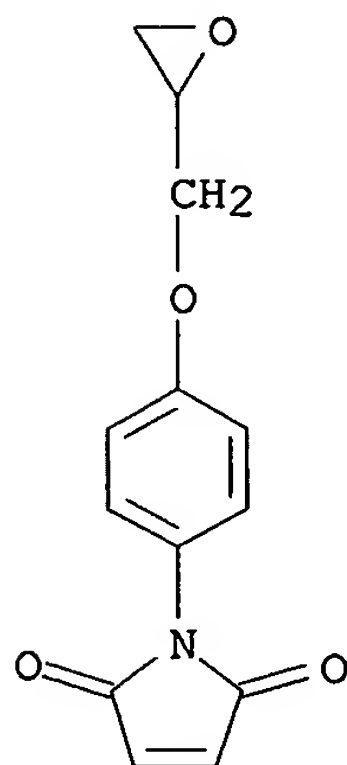


IT 70657-11-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(monomer; for preparation of thermosetting resins)

RN 70657-11-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiran-2-ylmethoxy)phenyl]- (9CI) (CA INDEX
NAME)



REFERENCE COUNT:

41

THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:479926 CAPLUS

DOCUMENT NUMBER: 129:190041

TITLE: (Hydroxyphenyl)hydroxyphthalimides, their epoxy

INVENTOR(S):

PATENT ASSIGNEE(S):

SOURCE:

DOCUMENT TYPE:

LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

derivatives, and thermosetting resin compositions with good heat resistance and electric properties

Hasegawa, Yoshikazu; Kajiwara, Yoshitaka; Oshimi, Katsuhiko; Kogo, Makiko

Nippon Kayaku Co., Ltd., Japan

Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

Patent

Japanese

1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

JP 10195050

A2

19980728

JP 1997-11944

19970107

PRIORITY APPLN. INFO.:

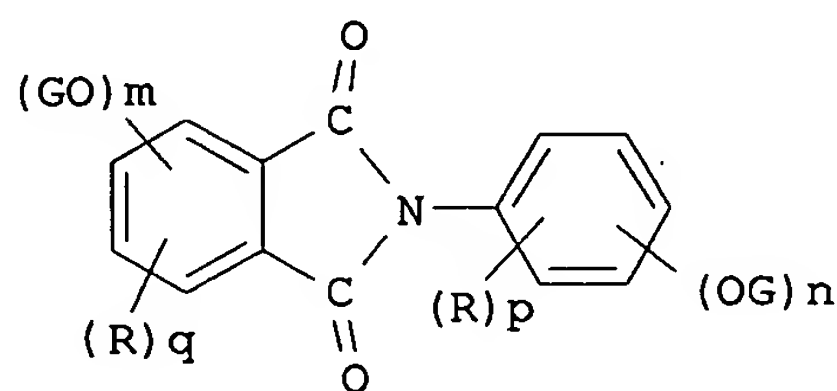
JP 1997-11944

19970107

OTHER SOURCE(S):

MARPAT-129:190041

GI



AB Resin compns. for electronic part sealing or laminated sheets contain (A) N-(hydroxyphenyl)hydroxyphthalimides I (R = alkyl, alkylene, aralkyl, aryl, halo, alkoxy; G = H; m, n = 1-2; p, q = 0-3), epoxy resins, and inorg. fillers or (B) I (G = 2,3-epoxypropyl) or their reaction products with I (G = H), hardeners, and inorg. fillers. Epoxy resins are manufactured by reacting I (G = H) with epihalohydrins and alkalis. Thus, imidation of 4-hydroxyphthalic acid with 4-aminophenol gave I [R = H, (OG)m = (OG)n = 4-OH], which was reacted with epichlorohydrin and Me₃N-HCl in dioxane at 70-80° for 6 h to give I [R = H, (OG)m = (OG)n = 4-(2,3-epoxypropyl)] (II). A cured product from II, phenol novolak, and PPh₃ showed Tg 175°.

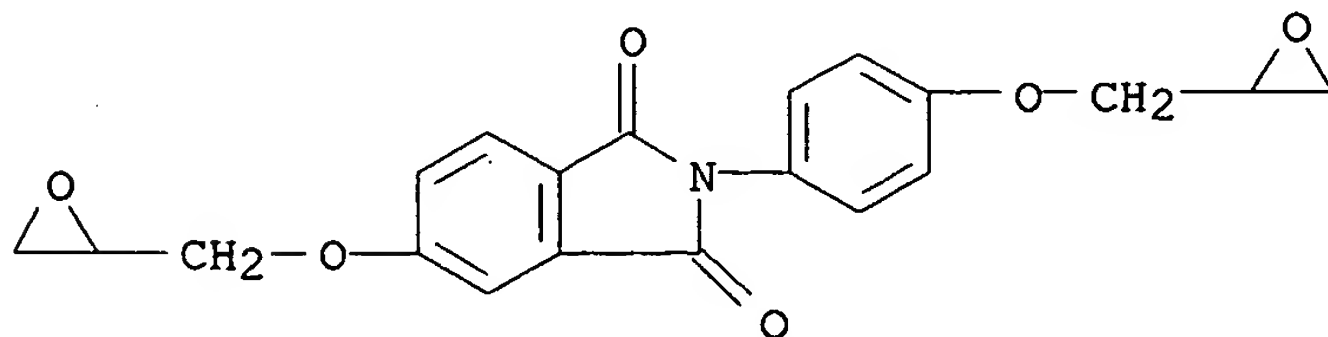
IT **211694-85-8DP**, polymers with phenol novolaks

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of phthalimide-containing epoxy resins for heat-resistant electronic part sealing compns. or laminated sheets)

RN 211694-85-8 CAPLUS

CN 1H-Isoindole-1,3(2H)-dione, 5-(oxiranylmethoxy)-2-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



IT **211694-85-8P**

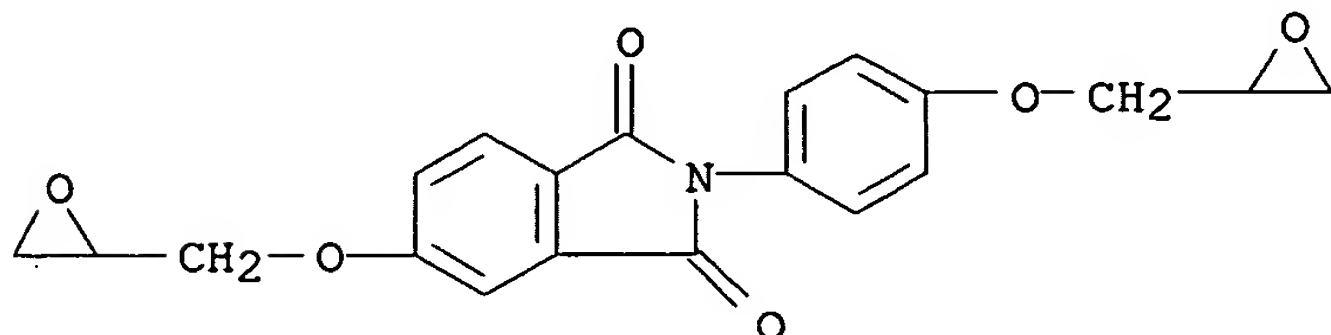
RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses)

(preparation of phthalimide-containing epoxy resins for heat-resistant electronic part sealing compns. or laminated sheets)

RN 211694-85-8 CAPLUS

CN 1H-Isoindole-1,3(2H)-dione, 5-(oxiranylmethoxy)-2-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



L9 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:268486 CAPLUS

DOCUMENT NUMBER: 128:308914

TITLE: Crosslinkers for optical polycarbonates

INVENTOR(S): Boonstra, Tjerk Oedse; Van Olden, David; Woudenberg, Richard Herman

PATENT ASSIGNEE(S): Akzo Nobel N.V., Neth.; Boonstra, Tjerk Oedse; Van Olden, David; Woudenberg, Richard Herman

SOURCE: PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9817644	A1	19980430	WO 1997-EP5674	19971009
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2269583	AA	19980430	CA 1997-2269583	19971009
AU 9748672	A1	19980515	AU 1997-48672	19971009
EP 934266	A1	19990811	EP 1997-911222	19971009
R: DE, FR, GB				
JP 2001503040	T2	20010306	JP 1998-518913	19971009
US 6232430	B1	20010515	US 1999-284886	19990804
PRIORITY APPLN. INFO.:			EP 1996-202951	A 19961023
			US 1996-31541P	P 19961202
			EP 1996-202851	A 19961023
			WO 1997-EP5674	W 19971009

OTHER SOURCE(S): MARPAT 128:308914

AB The title crosslinkers comprise R2(p-C6H4)n(CO2CH2)mR [n is 0 or 1; m is 0 or 1; R is CH2CH(OH)CH2OH or C6H3R12; R1 is independently OH or -CO2(hydroxyphenyl); R2 is N-bonded maleimide], with the proviso that 3,4-dihydroxyphenylmaleimide is excluded. A polycarbonate was prepared from a carbonate monomer, a diol and a crosslinker (e.g., dihydroxypropyl maleimide).

IT 70657-11-3P

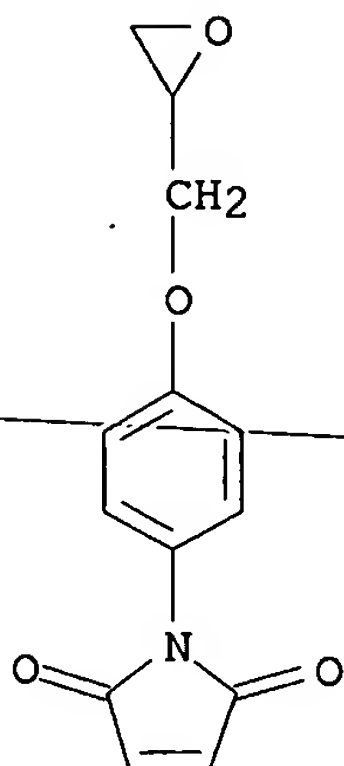
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT

(Reactant or reagent)

(crosslinkers for optical polycarbonates)

RN 70657-11-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:540354 CAPLUS

DOCUMENT NUMBER: 119:140354

TITLE: Thermal behavior of 4-maleimidophenyl glycidyl ether resins

AUTHOR(S): Choudhary, Lalita; Varma, D. S.; Wang, Francis W.; Choudhary, Veena; Varma, I. K.

CORPORATE SOURCE: Centre for Materials Science and Technology, Indian Institute of Technology Delhi, Hauz Khas, New, Delhi-110016, India

SOURCE: Thermochimica Acta (1993), 220(1-2), 261-70
CODEN: THACAS; ISSN: 0040-6031

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The title resins (I) were prepared from 4-aminophenol, maleic anhydride, and epichlorohydrin and characterized. Characterization was carried out by estimation of the epoxy equivalent and by IR and 1H-NMR spectroscopy. I were cured

by heating at >250°. A decrease in the curing temperature was observed after the addition of a stoichiometric or non-stoichiometric amount of an aromatic

diamine. The values of the curing temperature and the heat of the polymerization

reaction were independent of diamine concentration but depended on the structure

of the diamine. The char yields of cured I at 800° in N were 25-40%, which was much higher than values reported for epoxy resins.

IT 149829-34-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and curing characteristics of)

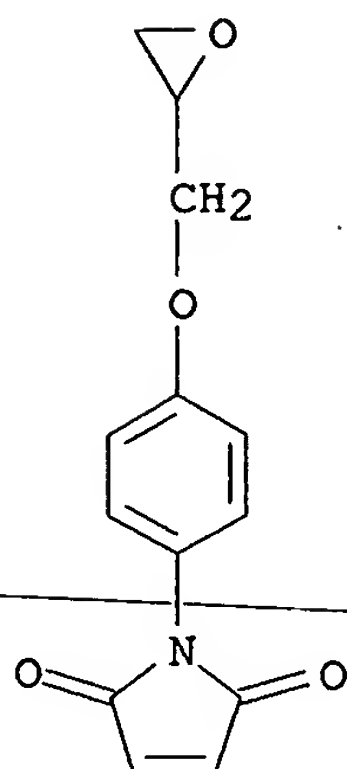
RN 149829-34-5 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, homopolymer (9CI)
(CA INDEX NAME)

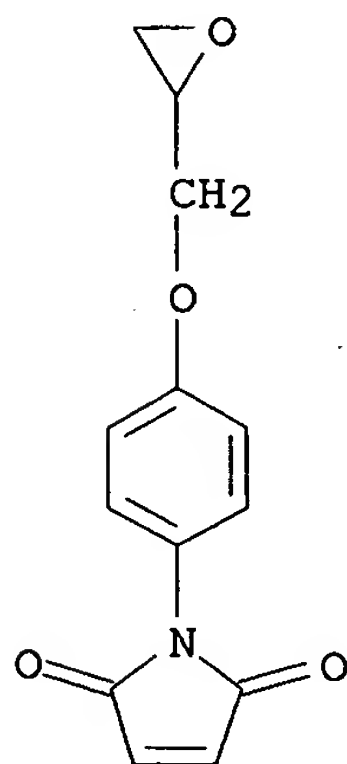
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CRN 70657-11-3
CMF C13 H11 N O4



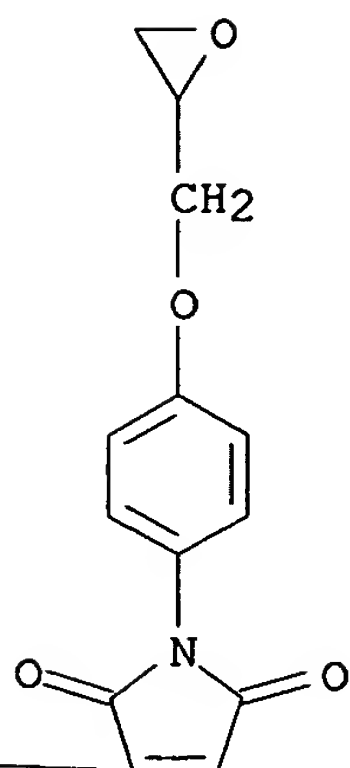
IT **70657-11-3P**
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)
(preparation and polymerization of)
RN 70657-11-3 CAPLUS
CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



IT **149829-32-3P 149829-33-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and thermal properties of cured)
RN 149829-32-3 CAPLUS
CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with 4,4'-methylenebis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

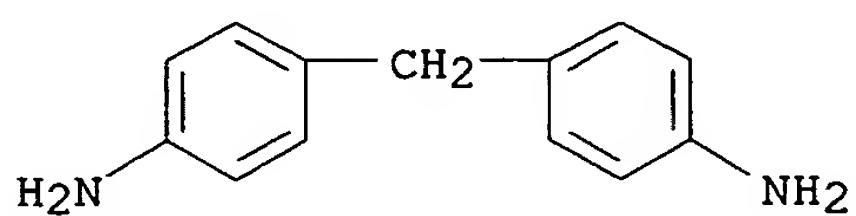
CRN 70657-11-3
CMF C13 H11 N O4



CM 2

CRN 101-77-9

CMF C13 H14 N2



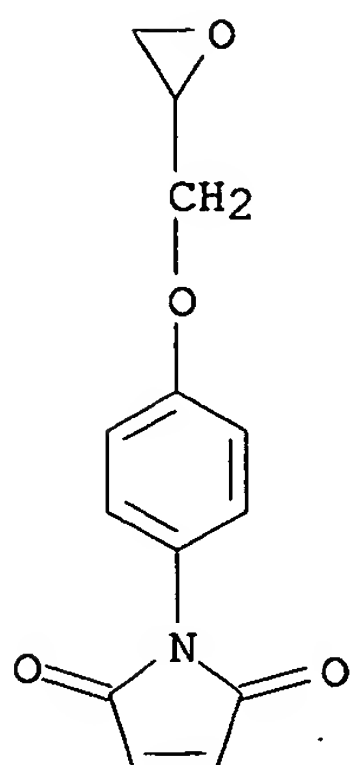
RN 149829-33-4 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]-, polymer with 4,4'-oxybis[benzenamine] (9CI) (CA INDEX NAME)

CM 1

CRN 70657-11-3

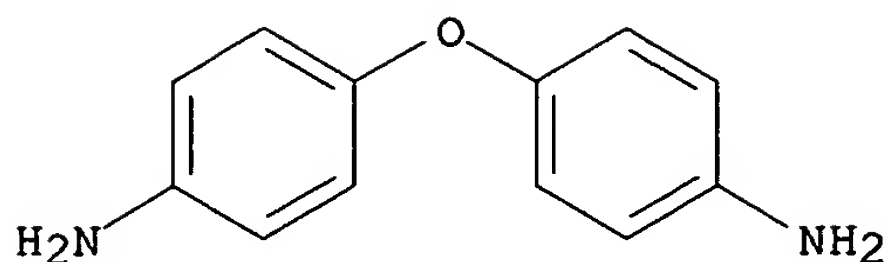
CMF C13 H11 N O4



CM 2

CRN 101-80-4

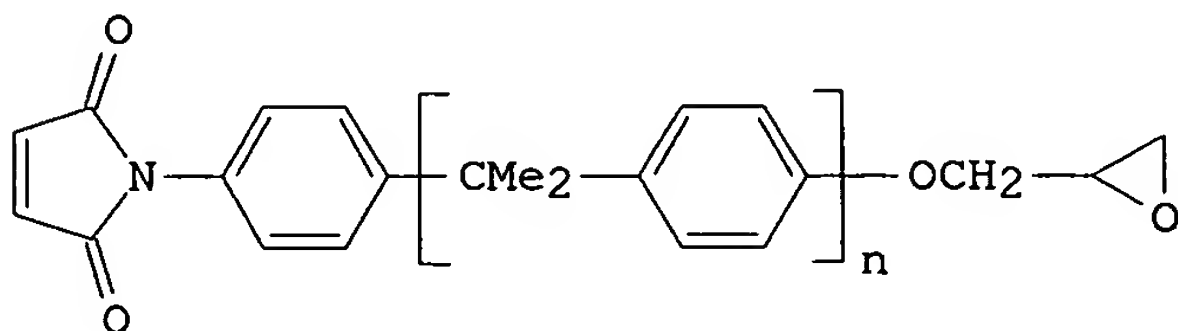
CMF C12 H12 N2 O



1/er

L9 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 1992:552203 CAPLUS
 DOCUMENT NUMBER: 117:152203
 TITLE: Modified polyolefin-containing thermoplastic resin compositions
 INVENTOR(S): Iwata, Ineo; Ueki, Toru; Yoshimura, Masaji; Kishi, Susumu
 PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04122754	A2	19920423	JP 1990-242608	19900914
PRIORITY APPLN. INFO.: GI			JP 1990-242608	19900914



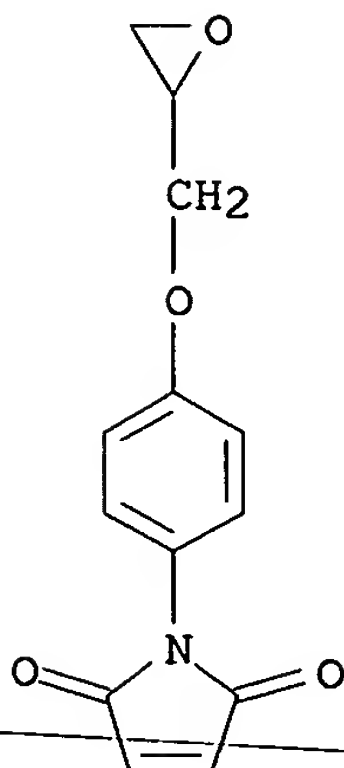
I

AB The title compns. with excellent mech. properties comprise (A) 5-95% mixts. of polyolefins and modified polyolefins prepared by treating 100 parts polyolefins with 0.1-20 parts imides I ($n = 0, 1$) in presence of 0.01-10 parts radical generators and (B) 5-95% polyesters, polycarbonates, and/or poly(phenylene sulfides). Thus, kneading a mixture of Noblen 100, I ($n = 0$) 1, and dicumyl peroxide 0.1 part at 200° gave modified resin, 15 parts of which was blended with 10 parts Noblen and 75 parts TRB-H. Then, the composition was kneaded, pelletized, and injection molded to give a test piece showing Izod impact strength 7 kg-cm/cm, tensile strength 450 kg/cm², and elongation 40%.

IT 70657-11-3D, reaction products with polyolefins
 RL: USES (Uses)
 (thermoplastic resin compns. containing, with good mech. strength)

RN 70657-11-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



L9 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:449452 CAPLUS

DOCUMENT NUMBER: 117:49452

TITLE: Preparation of imide-modified polyolefins with improved adhesion to glass fibers, metals, and ethylene-vinyl alcohol copolymer

INVENTOR(S): Yoshimura, Masaji; Ueki, Toru; Kishi, Susumu; Iwata, Ineo

PATENT ASSIGNEE(S): Mitsui Toatsu Kagaku K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

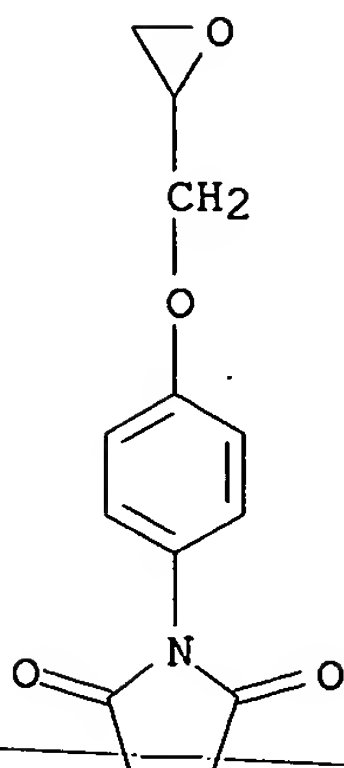
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04057812	A2	19920225	JP 1990-168375	19900628
PRIORITY APPLN. INFO.:			JP 1990-168375	19900628

AB Title polyolefins are prepared by treating 100 parts polyolefins with 0.1-20 parts N-[4-(2,3-epoxypropoxy)phenyl]maleimide (I) or 2-[4-(2,3-epoxypropoxy)phenyl]-2-(4-maleimidophenyl)propane in the presence of 0.01-10 parts radical generators. Thus, Noblen (polypropylene) 100, I 15, and dicumyl peroxide 0.1 part were mixed and screw extruded at 200° to obtain pellets, which were set on an Al plate and hot pressed to give a test piece showing 180° peel strength 20 kg (23°).

IT 70657-11-3DP, polyolefins modified with
RL: PREP (Preparation)
(preparation of, with good adhesion to glass fibers and metals and ethylene vinyl alc. copolymer)

RN 70657-11-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



L9 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1979:458140 CAPLUS

DOCUMENT NUMBER: 91:58140

TITLE: Thermosetting resin compositions

INVENTOR(S): Nishikawa, Akio; Segawa, Masanori; Yokono, Tadashi

PATENT ASSIGNEE(S): Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 54004997	A2	19790116	JP 1977-69848	19770615
PRIORITY APPLN. INFO.:			JP 1977-69848	19770615

AB Soluble and readily curable thermosetting resin compns. consist of N-(glycidylloxy)maleimide (I) [69861-04-7], N-(glycidylloxyethyl)maleimide [70657-12-4], or N-(p-glycidylloxyphenyl)maleimide [70657-11-3], an amine such as 4,4'-diaminodiphenylmethane (II) [101-77-9] or 4,4'-diaminodiphenyl ether, and an epoxy compound. Thus, I 100, II 5-60, EP 828 50-200, dicyandiamide 5, Et3N tetraphenylborate 3, stearic acid 2, epoxy silane 1, and powdered SiO2 382 parts were roll-blended at 70-80° to give a molding composition.

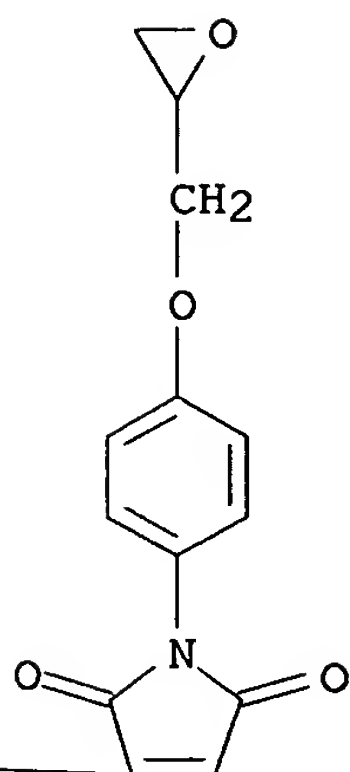
IT 70657-11-3

RL: USES (Uses)

(molding compns., containing epoxy resins and aromatic diamines, rapid-curing)

RN 70657-11-3 CAPLUS

CN 1H-Pyrrole-2,5-dione, 1-[4-(oxiranylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



=> FIL STNGUIDE

COST IN U.S. DOLLARS

SINCE FILE
ENTRY

TOTAL
SESSION

FULL ESTIMATED COST

38.96

605.28

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE
ENTRY

TOTAL
SESSION

CA SUBSCRIBER PRICE

-5.60

-11.20

FILE 'STNGUIDE' ENTERED AT 17:39:48 ON 18 NOV 2004

USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT

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AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Nov 12, 2004 (20041112/UP).

=> log y

COST IN U.S. DOLLARS

SINCE FILE
ENTRY

TOTAL
SESSION

FULL ESTIMATED COST

0.06

605.34

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE
ENTRY

TOTAL
SESSION

CA SUBSCRIBER PRICE

0.00

-11.20

STN INTERNATIONAL LOGOFF AT 17:40:30 ON 18 NOV 2004